THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, GALWAY,

FOR

THE YEAR ENDING 31st MARCH, 1866.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.
1866.

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THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, GALWAY,

FOR

THE YEAR ENDING 31ST MARCH, 1866.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

In the Session 1864–65 70 students entered this College, being an increase of 11 on the entrances (59) of the preceding Session 1863–64: 169 attended the college lectures, being an increase of 4 on the numbers (165) attending lectures in Session 1863–1864.

In the accompanying tables (Nos. I. and II.) will be found the numbers who have entered the college and attended its lectures in each Session since its opening.

I.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS who have entered the Queen's College, Galway, in each year from its opening.

Session.	Matriculated Students.	Non-Matriculated Students.	Total.	Members of Established Church.	Roman Catholics.	Presbyterians.	Wesleyan Methodists.	Independents.	Various.	Total.
1849–50, . .	64	4	68	24	38	6	–	–	–	68
1850–51, . .	23	3	26	10	9	7	–	–	–	26
1851–52, . .	31	5	36	13	21	2	–	–	–	36
1852–53, . .	21	2	23	8	12	3	–	–	–	23
1853–54, . .	25	5	30	12	15	3	–	–	–	30
1854–55, . .	26	15	41	18	18	3	2	–	–	41
1855–56, . .	32	7	39	14	15	8	1	1	–	39
1856–57, . .	35	8	43	15	22	3	1	1	1	43
1857–58, . .	36	7	43	16	17	9	–	1	–	43
1858–59, . .	44	4	48	20	19	7	2	–	–	48
1859–60, . .	35	5	40	12	25	1	–	1	1	40
1860–61, . .	*59	1	60	13	33	12	2	–	–	60
1861–62, . .	†59	3	62	21	35	6	–	–	–	62
1862–63, . .	60	4	64	18	27	16	1	–	2	64
1863–64, . .	54	5	59	20	21	11	2	4	1	59
1864–65, . .	58	12	70	26	28	13	–	2	1	70
1865–66, . .	46	3	49	18	19	10	3	–	1	49
Total, . .	708	93	801	276	374	120	14	10	7	801

* Including three who had previously been in attendance as non-matriculated students.
† Including one who had previously been in attendance as a non-matriculated student.

II.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS attending Lectures in the Queen's College, Galway, in each Session from its opening.

Session.	Matriculated Students.	Non-Matriculated Students.	Total.	Members of Established Church.	Roman Catholics.	Presbyterians.	Wesleyan Methodists.	Independents.	Various.	Total.
1849-50, . .	64	4	60	24	38	6	–	–	–	88
1850-51, . .	60	3	63	22	28	13	–	–	–	63
1851-52, . .	68	5	73	25	41	7	–	–	–	73
1852-53, . .	73	2	75	26	40	9	–	–	–	75
1853-54, . .	76	5	81	30	42	9	–	–	–	81
1854-55, . .	69	16	85	32	46	5	2	–	–	85
1855-56, . .	78	9	87	26	42	14	3	2	–	87
1856-57, . .	80	8	96	30	49	10	3	3	1	96
1857-58, . .	92	8	100	31	47	16	3	2	1	100
1858-59, . .	113	9	122	37	64	15	4	1	1	122
1859-60, . .	111	7	118	31	89	11	2	2	3	118
1860-61, . .	141	3	144	33	85	19	3	2	2	144
1861-62, . .	140	5	153	39	91	19	8	1	–	153
1862-63, . .	161	4	185	33	95	32	2	–	3	165
1063-64, . .	160	5	165	41	91	25	3	4	1	165
1864-65, . .	157	12	169	50	78	31	2	8	2	169
1865-66, . .	139	5	144	33	71	29	4	4	3	144
Total, . .	1,798	110	1,908	543	1,017	270	34	27	17	1,908

In tables Nos. III. and IV. appear the number of students attending the several classes, and the number of lectures given by each Professor in each Session.

III.—RETURN showing the NUMBER of STUDENTS attending the Lectures of each Professor, in each year since the opening of the College.

—	1849-50.	1850-1.	1851-2.	1852-3.	1853-4.	1854-5.	1855-6.	1856-7.	1857-8.	1858-9.	1859-60.	1860-1.	1861-2.	1862-3.	1863-4.	1864 5.
Greek, . . .	50	31	24	19	24	21	21	23	21	23	24	24	36	36	35	30
Latin, . . .	50	27	24	22	21	19	20	23	21	22	23	24	29	35	36	32
Mathematics, . .	54	38	28	28	27	20	25	34	34	42	35	42	48	52	41	43
English, &c., . .	47	43	28	23	23	22	22	27	20	31	22	29	24	38	39	30
Modern Languages, .	54	23	23	19	25	37	29	34	30	38	52	70	77	76	71	78
Celtic Languages, .	–	3	2	2	–	–	–	–	3	–	3	6	–	–	–	–
Natural Philosophy, .	8	11	23	19	27	23	21	27	29	38	33	70	57	67	62	66
Natural History, .	8	28	25	21	32	25	30	30	32	87	37	39	32	33	29	38
Logic and Metaphysics,	–	20	17	14	14	14	13	14	15	16	17	19	21	23	25	30
Chemistry, . .	13	25	3[illegible]	29	27	23	29	40	40	49	53	60	57	46	52	52
Mineralogy and Geology, . . .	–	4	14	15	10	14	10	8	15	16	17	–	6	10	5	6
Engineering, . .	2	10	11	15	10	11	9	10	15	18	12	21	10	21	17	16
Agriculture, . .	4	5	5	5	6	8	7	11	14	7	7	5	3	5	2	-
Anatomy and Physiology, . . .	10	9	[illegible]	15	18	13	22	35	39	47	52	71	68	65	56	54
Materia Medica and Medical Jurisprudence, . . .	–	5	9	11	10	7	8	17	18	24	20	26	34	28	32	23
Surgery, . . .	–	–	6	12	7	7	6	13	13	18	20	19	33	27	26	28
Midwifery, . .	–	–	4	7	4	–	4	3	11	5	11	12	14	17	12	14
Medicine, . .	–	–	–	4	4	2	6	6	7	7	6	8	16	21	26	19
English Law, . .	4	4	5	6	6	7	5	4	3	7	7	4	7	7	7	8
Jurisprudence and Political Economy, .	4	4	12	13	16	10	9	9	7	17	13	10	5	9	8	8

IV.—Return of the Number of Lectures delivered by each Professor in each Session since the opening of the College.

—	1849-50.	1850-1.	1851-2.	1852-3.	1853-4.	1854-5.	1855-6.	1856-7.	1857-8.	1858-9.	1859-60.	1860-1.	1861-2.	1862-3.	1863-4.	1864-5.
Greek, . . .	265	254	216	224	240	249	217	262	223	246	210	229	*315	290	255	255
Latin, . . .	270	252	212	238	233	190	217	244	195	189	189	196	181	263	228	237
Mathematics, . .	221	255	230	167	164	211	181	†186	†234	†233	†209	†210	†213	†199	†199	†213
English, &c., . .	37	28	77	97	126	128	127	107	100	92	97	76	16	160	147	145
Modern Languages, .	212	249	207	175	155	160	155	†162	†154	†151	†169	†246	†244	†229	†284	†256
Celtic Languages, .	–	90	65	30	–	–	–	‡3	48	–	30	24	–	–	–	–
Natural Philosophy, .	63	154	120	207	139	173	225	174	173	192	172	213	196	211	203	229
Natural History, .	–	120	83	92	85	76	68	68	87	77	76	56	57	62	70	82
Logic and Metaphysics,	–	40	114	159	123	141	138	162	106	109	170	165	132	182	146	157
Chemistry, . .	32	111	128	140	113	123	97	101	107	98	100	95	91	95	89	87
Mineralogy and Geology, . . .	–	51	45	57	51	50	45	49	60	64	64	§–	61	49	66	58
Engineering, . .	9	118	105	97	80	76	112	111	122	126	81	162	183	241	211	249
Agriculture, . .	–	106	112	160	144	180	192	174	123	154	182	85	65	54	28	–
Anatomy and Physiology, . .	111	112	111	108	100	115	104	103	102	104	‖116	‖96	‖90	‖84	‖105	‖118
Materia Medica and Medical Jurisprudence, . . .	–	51	80	90	95	93	95	96	90	90	77	85	78	88	80	84
Surgery, . . .	–	–	61	62	62	61	62	80	53	59	60	55	60	60	50	49
Midwifery, . .	–	–	59	70	62	–	6[illegible]	61	60	59	54	51	80	51	54	51
Medicine, . .	–	–	–	64	62	61	62	60	60	58	62	55	49	50	50	49
English Law, . .	18	45	55	97	71	72	72	40	35	48	49	72	68	64	68	60
Jurisprudence and Political Economy, .	20	48	60	96	106	95	60	52	51	97	49	61	60	67	83	70

It will be seen by a reference to tables I. and II., that up to the end of the Session 1864–65 a continued increase had taken place in the number of our students. In my last report I was able to bear the following testimony to the progress of the college under many difficulties, and to the determination of the people of this province to support an institution founded on the principle of united education, and free from all sectarian taint and bias:—

"Nothing perhaps can more clearly exhibit the peculiar difficulties with which this college has to contend, and the determination evinced by the people of the province to support it, than a comparison of the number of the population of the town of Galway with the number of students attending the college lectures at different periods since the opening of the college. It is needless to observe how much the wealth and population of the town and neighbourhood in which a college is situated must influence its growth and progress. In this respect the situation of the Galway College has been always peculiarly unfortunate as compared with that of almost any other similar institution in the empire, while the statistics of the last few years unfold a state of things which would appear to render any progress almost impossible. In the year 1851 the population of the town of Galway amounted to 23,787. In the same year the entrances into the college were 23, the number attending lectures, 63. In 1861 the population of the town had diminished to 16,786, while the college entrances had risen in that year to 60, and the number attending lectures to 144. Since that time the emigration, always increasing, has

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* Exclusive of 72 lectures to extra classes.
† Exclusive of a Course of Lectures given by the Senior Scholar.
‡ These Lectures were open to the Public.
§ Owing to an alteration in the Ordinances of the University, no Lectures on Mineralogy and Geology were delivered this Session.
‖ Exclusive of Anatomical Demonstrations.

continued to thin the population of the town, which can hardly now exceed from 12,000 to 13,000 persons, and the number entering the college in the present year is 70, the number attending lectures, 169."

It thus appeared that while the population of the town of Galway had, since the year 1851, diminished almost to one-half, the number entering the college had trebled, and the number attending lectures had increased almost in the same proportion. I lament to say that in the Session in which I write (1865–66), a very different state of things prevails. The entrances, as compared with those of last Session, have diminished from 70 to 49; the attendances on lectures from 169 to 144.

Nor are these unsatisfactory results confined to this college alone. In Cork the entrances have diminished from 90 in the last to 77 in the present session: the attendances on lectures from 263 to 235. In Belfast, while a slight increase of 8 has taken place in the attendances, the entrances have diminished by 17. Thus, in the three colleges, the entrances have fallen in one year from 295 to 244; the attendances from 837 to 793. When it is remembered that the entrances had increased from 217 in Session 1859–60 to 295 in Session 1864–65, and that the average annual increase in the attendances on lectures, during the same period, had been 58, the significance of the above statistics will be more fully appreciated.

For a diminution so large and sudden, it is but too easy to find an adequate cause. The policy announced by the Government at the close of the last Session of Parliament will sufficiently account for changes so disheartening to those engaged in the working of these colleges, and to the friends of liberal and united education.

In the total absence of all sectarian influence from our university and colleges, was found the charm which allured so many students of all persuasions to Halls where, in the common pursuit of knowledge, they might forget their sectarian differences, and form a community at once harmonious and enlightened. To unite a people distracted and weakened by religious discord, was as important an aim in the establishment of the Queen's Colleges, as to elevate them by an education befitting the subjects of a free constitution. The success of the experiment has been as great as its object was beneficent.

In the period that elapsed from the first opening of the colleges in 1849 to the close of the Session 1864–65, 3,330 students entered the colleges and attended their lectures. Of these 3,330 students, 957 belonged to the Established Church, 938 to the Roman Catholic Church, 1,197 to the Presbyterian Church, 58 were Wesleyans, 18 Independents, and 162 of other persuasions. It is a fact as remarkable as gratifying that from the opening of the colleges not a single case of dissension on the score of religious opinion has ever occurred.

The unexpected announcement by the Government that a system thus adapted to the wants and wishes of the people was to be altered in what gave to it its efficacy and attraction—that the Queen's University granted to "complete the system of the Queen's Colleges, and to maintain united education," was to be divorced from the colleges and remodelled on sectarian principles, to suit the views of the avowed enemies of united education; and the natural fear that a similar remodelling would be applied to the colleges, excited distrust and suspicion in the public mind, and while damping the zeal of the supporters of the colleges, gave to their enemies increased energy and courage.

It will be remembered that, since the foundation of the colleges, an opposition of the most formidable and unyielding character has endeavoured to impede their progress and utility. Within a few months after their opening, the Roman Catholic Deans of Residences—ministers of religion appointed with the sanction of their Bishops, to watch over the faith and morals of the students of their persuasion, and to give them religious instruction—were compelled, under the pain of instant suspension, to retire from their sacred offices. Since that time denunciations and invectives have pursued those parents who permitted their children to associate in the same class-rooms with their Protestant brethren, at that period of life when alone enduring friendships can be formed. Strong as were these measures, they yielded to those either threatened or adopted at the commencement of last year. The highest authority in the Roman Catholic Church in Ireland then declared that the sacraments of his Church ought to be withheld from every parent who might send his child to the Dublin University—a University in which so many eminent Roman Catholics have been educated, and to which they have ever referred with gratitude and love; and in the same sentence denounced the Queen's Colleges as far more pernicious than the Dublin University to the faith of their students. A few weeks after the Bishop of an adjacent diocese unhesitatingly proclaimed that thenceforward the sacraments should be refused to all who entered the Queen's Colleges. Such were some of the proceedings which declared the increased determination of their opponents to overturn these institutions, and to loosen by every means the firm hold they had taken of the affections of the laity. It was at a time like this, when a system assailed by such weapons seemed to demand fresh aid from all who professed to support it, that the public was astonished by the announcement that the Queen's University was to be in effect detached from the colleges, and to be reconstructed to meet the views of its opponents. Little wonder is it that these opponents were encouraged to renewed opposition to the colleges by the hope of thus obtaining fresh powers to destroy them, and that the large and important portion of the community which had supported these institutions on the ground of their total freedom from all sectarian influence was alienated by the strange intelligence that sectarianism was thenceforward to constitute a large and recognized feature of the system.

Nor can it be doubted that, in addition to the causes just mentioned, the proposed plan of opening the degrees of the Queen's University to persons who have not been in attendance at any of the Queen's Colleges, and who have not received any regular academic training, has operated to prevent students from entering the Colleges during the current session, by holding out to them the not-distant prospect of obtaining University degrees on the easy terms of passing an examination. This result was clearly anticipated by all who had experience in the working of the Queen's Colleges, and of the peculiar difficulties to which they are exposed, and which they have hitherto been gradually and steadily surmounting.

And here I may perhaps be permitted to place upon record my deliberate and decided conviction—a conviction to which some weight may be attached as I am supported in it by the expressed opinion of nearly every member of the college to which I belong, as well as by the great majority of the members of the sister colleges—that should the contemplated changes in the system of the Queen's University be carried into effect, they will prove in the highest degree detrimental not only to the colleges founded by your Majesty, with the approval of the most sagacious statesmen of all political parties, but also to the general interests of education in Ireland, and to the development of those sentiments of loyalty, patriotism, and toleration which, I rejoice to know, the Queen's Colleges have been largely instrumental in fostering and diffusing throughout the community.

The Queen's University was not founded with the object of affording facilities for the multiplication of degrees, but with the view of completing and accrediting the education supplied in the colleges; and the friends of united education who have participated in its struggles and witnessed its success, cannot but deplore changes which, under the guise of extending the sphere of the University, are in reality a departure from its original principle and design.

The aim of education is not merely to communicate knowledge; its essential function consists in forming intellectual habits, and imparting that general culture of mind and manners which the discipline of the class-room and constant personal intercourse with teachers and fellow-students are so well fitted to develop; and of which no system of examinations, be it ever so well devised, can be a sufficient guarantee.

This principle has hitherto been fully recognised by the Queen's University. Attendance on lectures has been rigidly enforced by that body as the leading and most excellent part of her system. Any attempt, under circumstances however peculiar, to modify the rigour of the rule enforcing this attendance, has been resisted, as tending to degrade the character of her degrees, and as interfering with the best interests of education. The same principle is embodied in the Report of the Commission appointed by your Majesty to inquire into the condition of the Queen's Colleges. The distinguished men who, at your Majesty's command, have reported on the condition of the Dublin University, enforce, with all the weight of their authority, the utility of attending the college lectures. In that University a succession of severe examinations, to which every student, from matriculation to graduation—a period of four years—is submitted, would seem, if any system of examinations could, to remove the necessity of attendance. Nevertheless, the Commissioners, while recognising the excellence of the examinations, the continued efforts of the college authorities to encourage residence, and the large increase that had taken place in the numbers attending lectures, adopt and enforce the opinion of Dr. Lloyd—an eminent authority in all academic matters—that "one of the most urgent of all academic reforms would be to give more direct encouragement to attendance on lectures." It is well known that these recommendations of the Commissioners have not been given in vain. Strange that while the Dublin University is encouraging in every way attendance on lectures, the Queen's University is called upon to declare such attendance useless; and, stranger still, that while a University founded in a great degree for the education of the clergy of the Established Church, is ridding herself of every dispensable sectarian feature, the Queen's University, founded for the education of the laity—a laity hitherto cursed by sectarian dissensions—should be urged to adopt sectarianism as a necessary element of her system and constitution.

To these three causes then, the fresh stimulus given by the Government proposal to the enemies of the colleges, the alienation caused in the public mind by the announced sectarianising of the Queen's University, and the belief that degrees would soon be obtained without the necessity of attending the colleges—to these causes, I feel assured, may be attributed that change in the progress of the colleges to which I have referred above.

Let us hope that the surprise and dismay with which these contemplated measures have been received by the friends of liberal education, both in and out of Parliament, will lead to their reconsideration; and that any Government which may be in power will hesitate before they abandon a system which has received such support from all classes and persuasions, and which statesmen of every party have regarded and supported as the last hope of Ireland.

I am happy to state that since my last report, two students of this college have been successful at the first examination for the India Civil Service. Another has obtained a Ceylon Writership, and two others appointments in the Indian Public Works Department. One of our students has also obtained in public competition the important office of Inspector of National Schools. These and several minor appointments won by students of the college, attest the value of the education afforded in its lecture-rooms.

In the Appendix I submit a detailed account of the courses of instruction and examination in the several departments, together with a selection from the questions set at the Scholarship and other examinations.

EDWARD BERWICK,
President.

QUEEN'S COLLEGE,
June, 1866.

APPENDIX.

APPENDIX, No. 1.

QUEEN'S COLLEGE, GALWAY.

1866-7.

DAYS AND HOURS OF MATRICULATION AND SCHOLARSHIP EXAMINATIONS. OCTOBER, 1866.

DAYS.	HOURS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.
Tuesday, 16th Oct.	9—5		Supplementary Examinations.	Supplementary Examinations.
Wednesday, 17th Oct.	9—5		Supplementary Examinations.	Supplementary Examinations.
Thursday, 18th Oct.	9-12		Lit. Schol.—Latin. Med. Engin. } Schol.—Chem.	
	2—5		Lit. Schol.—Greek. Med. Engin. } Schol.—Chem.	
Friday, 19th Oct.	9-12	Matriculation.	Lit. Schol.—English. Eng. Schol.—Geom. Draw., &c.	
	2—5	Matriculation.	Lit. Schol.—English. Eng. Schol.—Geom. Draw., &c.	
Saturday, 20th Oct.	9-12		Lit. Schol.—Latin. Med. Schol.—Nat. Hist.	
	2—5		Lit. Schol.—Greek. Med. Schol.—Nat. Hist.	
Monday, 22nd Oct.	9-1	Lit. Med. } Schol.—English. Lic. in Arts Ex.	Med. Lit. } Schol.—Mod. Lang.	Engin. Schol.—Engin.
	2—5	Lit. Med. } Schol.—Greek.		Engin. Schol.—Engin.
Tuesday, 23rd Oct.	9-12	Lit. Med. } Schol.—Latin.	Med. Schol.—Anat.	Engin. Schol.—Min. & Geol.
	2—5	Lit. Med. } Schol.—Greek.	Med. Schol.—Anat.	
Wednesday, 24th Oct.	9-12	Lit. Med. } Schol.—Latin.	Med. Schol.—Nat. Phil.	Engin. Schol.—Nat. Phil.
	2—5	Science Med. Engin. } Schol.—Math. Lic. in Arts Ex.	Science Engin. } Schol.—Math.	Engin. Schol.—Nat. Phil.
Thursday, 25th Oct.	9-12	Science Med. Engin. } Schol.—Math.	Science Engin. } Schol. Math.	Engin. Schol.—Math.
	2—5			Engin. Schol.—Math.

The Examination for the Third and Fourth Year Scholarships in MEDICINE will commence on Monday, the 29th October. Arrangements will be made for holding the Examinations for Law Scholarships early in December.

QUEEN'S COLLEGE, GALWAY.—FOUNDED DECEMBER 30, 1845.

THIS College is a Corporation, founded by Letters Patent under the Great Seal of Ireland, under the name and style of the "President and Professors of Queen's College, Galway."

The general government and administration of the College under the Statutes, and in cases not provided for by the Statutes, is vested in a Council consisting of the President, and six Professors elected by the Corporate Body.

VISITORS.

His Grace the Lord Primate.
His Grace the Duke of Leinster.
The Right Honourable the Earl of Fingall, K.P.
The Right Honourable the Chief Secretary for Ireland.
The Right Honourable Lord Chancellor Brady.
The Right Reverend the Lord Bishop of Tuam.
The Most Reverend Archbishop M'Hale.
The Moderator of the General Assembly.
The President of the College of Physicians.
The President of the Royal College of Surgeons.

PRESIDENT.

EDWARD BERWICK, B.A.

COUNCIL.—1865–66.

The President.
Richard B. Bagley, M.A.
George J. Allman, LL.D.
Thomas W. Moffett, LL.D.

Augustus Bensbach, M.D.
James V. Browne, M.D.
Richard Doherty, M.D.

PROFESSORS.

Greek,	Darcy W. Thompson, M.A.
Latin,	Richard Blair Bagley, M.A.
Mathematics,	George Johnston Allman, LL.D.
Natural Philosophy,	Arthur H. Curtis, LL.D.
History, English Literature, and Mental Science,	Thomas W. Moffett, LL.D.
Chemistry,	Thomas H. Rowney, PH.D.
Natural History,	Alexander G. Melville, M.D. Edin., M.R.C.S. Eng.
Mineralogy and Geology,	Wm. King, Cor. Mem. Nat. Hist. and Med. Soc. Dresden, &c.
Modern Languages,	Augustus Bensbach, M.D.
Jurisprud. and Polit. Econ.	John E. Cairnes, M.A.
English Law,	William B. Campion, B.A.
Anatomy and Physiology,	John Cleland, M.D.
Practice of Medicine,	Nicholas Colahan, M.D., F.R.S., Edin.
Practice of Surgery,	James V. Browne, M.D., L.R.C.S.I.
Materia Medica,	Simon M'Coy, F.R.C.S.I.
Midwifery,	Richard Doherty, M.D., Hon. V.P., Obstet. Soc. Dub.
Medical Jurisprudence,	
Civil Engineering,	Edward Townsend, M.A.

OFFICE-BEARERS.

William Lupton, M.A.,	Registrar.
George J. Allman, LL.D.,	Bursar.
John H. Richardson, B.A.,	Librarian.

DEANS OF RESIDENCE.

United Church of England and Ireland,	Rev. J. Treanor, B.A.
General Assembly of the Presbyterian Church in Ireland,	Rev. William Adair.
Wesleyan Methodist Church,	Rev. John Duncan.
Independent Church,	Rev. John Lewis.

THE COLLEGE SESSION.

The College Session is divided into three Terms.

The First Term of the Session 1865–6 commences on Tuesday, October 17, and ends on Friday, December 21, 1865.

The Second Term commences on Friday, January 5, and ends on Saturday, March 24, 1866.

The Third Term commences on Monday, April 9, and ends on Saturday, June 9, 1866.

The First Term of the Session 1866–7 commences on Tuesday, October 16, and ends on December 22, 1866.

STUDENTS.

Students are either Matriculated or Non-Matriculated.

Matriculated Students are required to pass an entrance or Matriculation Examination, and to pursue fixed courses of study.

Non-Matriculated are permitted to attend the Lectures of any of the Professors, without being required to pass the Matriculation or any other Examination.*

MATRICULATION.

Candidates for Degrees or Diplomas in the Queen's University, or for Scholarships, Exhibitions, or Prizes, in Queen's College, Galway, are required to pass a Matriculation Examination.

Students are admitted by examination to Matriculation in the Faculties of Arts, Law, and Medicine, and in the School of Engineering. In each Faculty and School special courses are prescribed for examination.†

The Matriculation Examination is held at the commencement of the first Term of each Session; but additional Matriculation Examinations are held before the close of the Term.

The last Matriculation Examination for Students in the Faculty of Medicine is held on the 16th of November.

Candidates for Matriculation are required to appear in the Registrar's office before the Matriculation Examination for the purpose of entering their names on the College books.

Each candidate, before being admitted to the Matriculation Examination, is required to pay to the Bursar the Matriculation and College fee of ten shillings. This fee will be returned to such students as may fail to pass the Examination.

ATTENDANCE ON LECTURES.

Attendance upon Lectures is strictly prescribed to all Matriculated Students.

All Students shall pay the College Fee, and a moiety of their Class Fees, to the Bursar, and enter their names with the Registrar, before they are admitted to the classes of the several Professors.

The Registrar shall furnish to the Professors, before the commencement of Lectures in each Term, the rolls of their several classes, and from time to time such names as shall be afterwards entered with him.

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* For further particulars of the status and privileges of Non-Matriculated Students, *vide* p. 14.

† *Vide* pp. 17, 24, 26, 31.

No Student shall have his name replaced on the rolls of the Professors at the commencement of the second Term who has not paid the second moiety of his Class Fees.

Attendance on Lectures includes preparation for Lectures; and it is competent for a Professor who, on any occasion, is not satisfied with the preparation of a Student, to refuse him credit for attendance.

No Student shall be regarded as having kept a Course of Lectures who has not attended at least two-thirds of the entire number of Lectures delivered.

Attendance upon Courses of Lectures in the Faculty of Arts is recognised in cases where Students pass to a different Faculty or School.

In case of absence arising from illness or other unavoidable cause, the Student is required to lodge with the Registrar, immediately on recommencing his attendance, a letter or certificate explaining his absence, to be laid before the Council.

EXAMINATIONS.

A General Sessional Examination is held at the close of each Session in the subjects upon which Lectures have been delivered during the Session. There is also a Supplementary Examination on the same subjects at the commencement of the following Session.

Every Matriculated Student in the Faculties of Arts and Law, and in the Schools of Engineering and Agriculture, must pass either the General Examination or the Supplementary Examination before his name can be entered on the College Register as having completed the Session; and no Student in these Faculties and Schools can be permitted to enter upon the Course of the succeeding year until he has so completed the previous Session.

No Student is admitted to the Sessional or the Supplementary Examination who has not kept the Courses of Lectures prescribed to Students of his class and standing.*

SCHOLARSHIPS.

Forty-six Junior and eight Senior Scholarships have been founded in the College.

Of the Junior Scholarships†—

Thirty, of the value of £24 each, are appropriated to Students pursuing the Course prescribed for the Degree of B.A.

Three, of the value of £20 each, to Students pursuing the Course for the Diploma of Elementary Law and the Degree of LL.B.

Eight, of the value of £25 each, to Students pursuing the Course for the Degree of M.D.

Five, of the value of £20 each, to Students pursuing the Course for the Diploma of Civil Engineering.

The Examinations for Junior Scholarships are held at the commencement of the First Term of the Session.

No Student is allowed to become a Candidate for a Junior Scholarship until he has paid the College Fee and one-half of the Class Fees for the current Session.

No Student is permitted to present himself as a Candidate for a Senior Scholarship who has not entered his name with the Registrar, and paid the College Fee to the Bursar.

All Senior Scholars in Arts are required to be in attendance in the College during their period of office.

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* For University Examinations, see the "University Regulations."

† For the distribution of these Scholarships, the subjects of Examination, and the conditions upon which they are held, *vide* pp. 19, 25, 31, 36.

Appendix, No. 1. Junior Scholars are exempted from the payment of one moiety of the Class Fees for the courses prescribed to Students of their faculty and standing.

No Student can hold the same Scholarship a second time.

No Scholarship will in any case be awarded, unless the Candidates are, in the opinion of the Examiners, sufficiently qualified in the prescribed courses.

EXHIBITIONS.

The College is empowered to award Exhibitions, varying in value from £10 to £18, at the same Examinations as the Scholarships, and to be held upon the same terms.

Exhibitioners are required to pay the whole amount of the Class Fees for the Session.

No Student is allowed to compete for a Junior Scholarship or Exhibition in any course substantially the same as that in which he has already held a Scholarship or Exhibition.

No Student who has been awarded an Exhibition or Prize for answering in any of the courses for Senior Scholarships can a second time obtain an Exhibition or Prize for answering in the same course; but such Exhibitioners and Prizemen are not precluded from competing for Senior Scholarships.

All Junior Scholars and Exhibitioners are required to attend lectures, and pass the Sessional Examinations during their year of office.

PRIZES.

The College is empowered to award Prizes, by examination, at the close of the Session, to the most distinguished answerers in the several courses of study pursued during the Session.

Two prizes for English prose composition, and two prizes for Geometry,* have been founded in the College, to be awarded annually at entrance:—first prize for English prose composition, £3 worth of books; second do., £2 worth of books: first prize for Geometry, £3 worth of books; second do., £2 worth of books.

All Candidates for Scholarships, Exhibitions, or Prizes, must have passed the Matriculation Examination in the Faculty or School to which the Scholarships, Exhibitions, or Prizes are attached.

NON-MATRICULATED STUDENTS.

Non-Matriculated Students are those who are permitted to attend the Lectures of any of the Professors without being required to pass the Matriculation or any other examination. They are required to pay to the Bursar the regulated Fees for the Classes proposed to be attended, and to sign an engagement to observe order and discipline in the College. They are not entitled to compete for Scholarships or other Collegiate distinctions.

During the term of their attendance on College Lectures they are admitted to read in the Library; and, on payment of a deposit of £1, are permitted to take out two volumes on loan, under the same regulations as Matriculated Students.

Every Non-Matriculated Student must pay to the Bursar one-half of his Class Fees before his name can be entered on the rolls of the several Classes, and the remainder at the commencement of the second Term.

* Candidates are recommended to read M'Dowell's Exercises on Euclid and in Modern Geometry (Cambridge: Deighton, Bell, and Co., 1863), from beginning to page 150.

STUDENTS OF OTHER UNIVERSITIES.

Any Student who shall have pursued part of his Collegiate Studies in any one of the Queen's Colleges, or in any University capable of granting Degrees in the several Faculties of Arts, Law, and Medicine, and any Legal or Medical Student who shall have pursued part of his Legal or Medical Studies under teachers recognised by the Senate of the Queen's University, on passing such Examinations, and fulfilling such other conditions as the Council shall prescribe, may take corresponding rank in this College; and also may compete for Scholarships or other Prizes of the corresponding year, provided he shall not hold at the same time a Scholarship or other office of emolument in any other University, College, or Medical School.

FEES.

The College Fees payable by Matriculated Students are 10*s.* at the commencement of the first year, and 5*s.* at the commencement of each subsequent year.

The Fees payable by Students, whether Matriculated or Non-Matriculated, to the several Professors for attendance on the several Pass Courses of Lectures or instruction, are £1 for each Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for each re-attendance on the same.

This rule applies in all cases except the following:—

The Fee payable for the Course of Anatomy and Physiology is £3, when attended for the first time, and £2 for every subsequent attendance; and the Fee payable for Practical Anatomy or Practical Chemistry is £3 for each attendance.

The Fees payable for attendance upon Honor Courses of Lectures and upon Courses of Special Instruction not prescribed as a qualification for a Degree or other University distinction, are £2 for each Course, whether attended for the first time or re-attended.

This rule does not apply to special instruction in Practical Chemistry and in Operative Surgery. In the former case, the Fee is regulated by the time spent in the laboratory, at the rate of £1 a month. The Fee for Operative Surgery is £3.

Matriculated Students who attend voluntary Courses are, so far as these Courses are concerned, regarded as Non-Matriculated.

TABLE showing in each case the *minimum* amount of Fees payable by Students to the College and for attendance on the several prescribed Courses of Lectures and Instruction.

—	First Session.			Second Session.			Third Session.		
	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
For the Degree of B.A.,	9	10	0	7	5	0	8	5	0
If a Scholar,	5	0	0	3	15	0	4	5	0
For the Degree of M.D.,		—			—			—	
If a Scholar,*		—			—			—	
For the Diploma of Elementary Law,	4	10	0	4	5	0	2	5	0
If a Scholar in Law,	2	10	0	2	5	0	1	5	0
For the Degrees of LL.B. and LL.D.	13	10	0	11	5	0	10	5	0
If a Scholar in Arts,	9	0	0	7	15	0	6	5	0
If a Scholar in Law,	11	10	0	9	5	0	5	5	0
For the Diploma of Civil Engineering,	10	10	0	12	5	0	6	5	0
If a Scholar,	5	10	0	6	5	0	3	5	0

* The Fees for the Degree of M.D. vary according to the course of study pursued.

Appendix, No. 1.

In all cases the Fees are payable in two instalments. The first instalment includes the College Fee—which is 10*s.* for the first year, and 5*s.* for every subsequent year—and a moiety of the Class Fees payable to the several Professors whose lectures are prescribed in the curriculum. This first instalment is payable at the commencement of the First Term in which the Student enters. The second instalment—consisting of the remaining moiety of the Class Fees—is payable at the commencement of the Second Term. Scholars are exempted from the payment of this latter moiety.

RESIDENCES.

It is provided by the Statutes that every Matriculated Student under the age of twenty-one years shall reside, during the College Terms, with his parent or guardian, or with some relation or friend to whose care be shall have been committed by his parent or guardian, or in a Boarding-house, licensed by the President of the College, and arranged for the reception of Students, where he shall be placed under the moral care and spiritual charge of the Dean of Residences of his creed.

DISCIPLINE.

All Matriculated Students are required to wear a cap and gown.

A penalty of sixpence shall be imposed on any Student who shall appear within the quadrangle without his cap and gown.

The Porter at the lodge is instructed to report to the Bursar the name of any Matriculated Student who shall appear within the quadrangle without his cap and gown, and also to intimate to the Student at the time that he will be reported.

Any Student so reported shall pay the fine to the Bursar within one week, without receiving further notice, and the fine shall be doubled every week that the fine remains unpaid.

A Professor may inflict a fine not exceeding 2*s.* 6*d.* on any Student for any breach of discipline in his class which he does not consider of sufficient importance to bring under the notice of the Council.

Members of the Library Committee may inflict a fine not exceeding 2*s.* 6*d.* on any Student, for any breach of discipline in the Library, which they do not consider of sufficient importance to bring under the notice of the Council.

LIBRARY REGULATIONS.

The Library is open from the commencement of the Session to the 1st of March, between the hours of 10 A.M. and 4 P.M., and from the 1st of March to the 1st of July, between the hours of 10 A.M. and 5 P.M., except (1) on College holidays; (2) for a period of five days in the Christmas and Easter recesses respectively.

The Library is closed during the month of July, except for one hour each week, when the Librarian attends to issue books. From the 1st of August to the commencement of the College Session the Library is open between the hours of 11 A.M. and 3 P.M.

No Student is admitted to the Library without subscribing the following declaration:—

> We the undersigned do hereby promise to the President and Council of the Queen's College, Galway, that we will not mark, turn down the leaves of, or write on paper placed upon, or in any way whatsoever soil, deface, injure, or remove, without permission, any book or document in the Library of said College. We also promise that we will not injure the Library furniture; that we will faithfully observe all the rules made for the regulation of the Library, and that we will acquaint the College Authorities with any serious instance of violation of the above rules which may come under our notice.

No Student can borrow books from the Library until he has deposited the sum of £1 with the Bursar.

No Student can have more than two volumes on loan from the Library at the same time.

No Student can retain a volume borrowed from the Library more than one week; but the borrower, on returning the book, may renew the loan, if the book has not been in the meantime applied for.

Any Student, on receiving at any time a notice from the Librarian, must return, within twenty-four hours, the books belonging to the Library in his possession.

Any person losing or injuring a book belonging to the Library must replace it by another copy of the same edition and of equal value, or pay such a sum of money as will enable the College to replace it.

FACULTY OF ARTS.

THE DEGREES OF B.A. AND M.A.

1.—*The Degree of Bachelor in Arts.*

Candidates for the Degree of B.A. in the Queen's University, must on entering Queen's College, Galway, pass the following Matriculation Examination.

MATHEMATICS.

Arithmetic—Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.

Algebra—Including Fractions, Proportion, and the Solution of Simple Equations.

Geometry—Euclid, Books I., II.

THE GREEK LANGUAGE.

Any one of the following authors which the Candidate may select:—

Homer—Iliad, Books I.–IV.
Xenophon—Anabasis, Books I.–III.
Lucian—Walker's Selections.

THE LATIN LANGUAGE.

Any one of the following authors which the Candidate may select:—

Virgil—Æneid, Books I.–V.
Horace—Odes, Book I.; Satires, Book I.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Cæsar—Gallic War, Books V., VI.
Re-translation from English into Latin of portions of Cæsar.

HISTORY AND THE ENGLISH LANGUAGE.

History, Grecian and Roman, Outlines of.
Geography, Ancient and Modern, Outlines of.*
Grammar, English Grammar, and Composition.

Students are admitted to the University Examination for this Degree who, after having passed the Matriculation Examination, have attended the College Lectures for at least two full terms in each Session, have passed the prescribed College Examinations, and are recommended for promotion to the Degree by the President of the College.

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* Rev. T. K. Arnold's Handbooks are recommended.

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Appendix, No. 1. The Session extends from the third Tuesday in October to the second Saturday in the following June, with short recesses at Christmas and Easter. Each Session consists of three Terms.

The studies for the Degree of Bachelor in Arts extend over three Sessions, and comprise attendance on the following Curriculum:—

FIRST SESSION.

English (One Term).
Greek.
Latin.
A Modern Continental Language.
Mathematics.

SECOND SESSION.

Logic (One Term).
Natural Philosophy.

Along with any two of the following:—

Greek (Second Course).
Latin (Second Course).
A Modern Continental Language (Second Course).
Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.
Metaphysics, or History, or Political Economy (Two Terms).
Chemistry.
Zoology, or Botany.

Attendance on these Courses includes passing such Examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

In each College there is a General Examination in the subjects upon which lectures have been delivered during the Session. There is also a Supplementary Examination in the same subjects, at the commencement of the following Session. All Students must pass either the General Examination or the Supplementary Examination, before they proceed with the course of the succeeding year.

Candidates for the Degree of Bachelor in Arts must reside at their respective Colleges during at least the first two Terms of each Session, but may be exempted from residence during the third Term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for attendance upon a like number of the Courses above set down for study in the Third Session.

Candidates for the Degree of Bachelor in Arts are required to pass two University Examinations—the Previous Examination held simultaneously in each of the Colleges of the University, and the Degree Examination held in the Hall of the University in Dublin.

Students who have completed their second Session must pass the Previous Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

For the regulations as to the First University Examination in Arts, and the Examination for the Degrees of B.A. and M.A., see the "University Regulations."

For the Exhibitions awarded at the First University Examination in Arts, see p. 39.

DAYS AND HOURS OF LECTURES.

	Subjects.	Terms.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Year	French,	1, 2, 3,	10	.	10	10	.	.
	German,	1, 2, 3,	.	2	.	2	.	.
	Latin (pass),	1, 2, 3,	12	.	12	.	12	.
	Greek (pass),	1, 2, 3,	.	11	.	12	.	12
	Mathematics (pass),	1, 2, 3,	1	.	1	.	1	.
	English,	2	11	.	11	.	11	.
	Latin (honor),	1, 2, 3,	.	11	.	11	.	11
	Greek (honor),	1, 2, 3,	12	.	12	.	12	.
	Mathematics (honor),	1, 2, 3,	.	1	.	1	.	.
2nd Year	French,	1, 2, 3,	3	.	3	.	.	.
	German,	1, 2, 3,	2	.	.	.	3	.
	Greek,	1, 2, 3,	.	10	.	11	.	.
	Latin,	1, 2, 3,	11	.	11	.	10	.
	Mathematics (pass),	1, 2, 3,	.	1	.	1	.	.
	Natural Philosophy (pass),	1, 2, 3,	12	.	12	.	.	.
	Logic,	2,	1	.	1	.	1	.
	Mathematics (honor),	1, 2, 3,	12	.	12	.	12	.
	Natural Philosophy (honor),	1, 2, 3,	.	2	.	2	.	.
3rd Year	Zoology or Botany,	1, 2, 3,	.	11	.	11	11	11
	Chemistry,	1, 2, 3,	12	.	12	.	12	12
	English Language and Literature,	1, 2,	3	.	3	.	3	.
	Metaphysics,	1, 2,	.	1	.	1	.	1
	History,	1, 2,	2	.	2	.	2	.

JUNIOR SCHOLARSHIPS IN ARTS.

Of the Thirty Junior Scholarships appropriated to Students in the Faculty of Arts :—

Ten are tenable by Students of the First Year.
Ten " " Second Year.
Ten " " Third Year.

Of the ten Junior Scholarships in Arts tenable by Students of each year, five are awarded for proficiency in literary studies, and five for proficiency in scientific studies; but it is competent for the Council, in case Scholarships in either department are withheld on the ground of insufficient answering, to assign the unawarded Scholarships to the other department.

The Examination for Junior Scholarships in Arts of the first year takes place immediately after the first Matriculation Examination of the Session, and is open to all Students of the first year, who have passed that Examination, and have paid the regulated fees. Those candidates to whom Scholarships are then awarded hold their Scholarships for one year.

There is a further Examination, at the commencement of the second year, which is open to all Matriculated Students in Arts of that year who have passed the Examination and attended the lectures prescribed to Students of the first year, and who have paid the regulated fees.

Those Candidates to whom Scholarships are awarded at this further Examination, hold their Scholarships for two years, provided (1) they answer sufficiently in two Honor Courses at the Sessional Examination of the second year; (2) they pass the First Examination for the Degree of B.A.

If any Student be placed, at the Examinations for Junior Scholarships in Arts, first on both the lists of candidates, he is entitled to a Scholarship of each division; but in no other case can two Scholarships be held by the same Student.

Appendix, No. 1.

SCHOLARSHIP EXAMINATIONS.—SESSION 1865–66.

LITERARY SCHOLARSHIPS, FIRST YEAR.

THE GREEK LANGUAGE.

Homer—Iliad, Books I.–VI.
Euripides—The Ion.
Xenophon—The Anabasis, Books I.–III.
Lucian—Walker's Selections.

THE LATIN LANGUAGE.

Virgil—The Æneid, Books I.–VI.
Horace—The Odes, Books I., II.; the Satires; the Epistles.
Cicero—Pro Lege Manilia.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Livy—Books I.–III.

COMPOSITION.

In Greek, Latin, and English Prose.*

HISTORY AND GEOGRAPHY.

Grecian History, to the Death of Alexander.†
Roman History, to the Accession of Augustus.‡
Outlines of Ancient and Modern Geography.§

SCIENCE SCHOLARSHIPS, FIRST YEAR.

MATHEMATICS.

Arithmetic:—

Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.

Algebra:—

Including the Solution of Simple and Quadratic Equations; Arithmetical and Geometrical Progressions; Permutations and Combinations; the Binomial Theorem; the nature of Logarithms.

Geometry:—

Euclid, Books I., II., III., IV., and VI., with definitions of Book V.

Plane Trigonometry:—

So far as to include the Solution of Triangles.

The use of Logarithmic and Trigonometrical Tables.

LITERARY SCHOLARSHIPS, SECOND YEAR.

THE GREEK LANGUAGE.

Homer—Books VI.–XII.
Plato—The Apology and the Crito.
Xenophon—Hellenica, I.–IV.
Æschylus—Prometheus Vinctus.

Candidates will be examined in Dr. Smith's History of Greece, and in Curtius' larger Greek Grammar, edited by Dr. Smith.

The following books are recommended:—Merivale's Fall of the Roman Republic; Abeken's Life and Letters of Cicero; Mommsen's Roman History, Vol. I.; and Ramsay's Roman Antiquities, fourth edition.

THE LATIN LANGUAGE.

Cicero—Tusculan Disputations.
Cicero—Letters to Atticus, Books III.–V.
Tacitus—Annals, Book I.
Terence—Andria.
Virgil—Georgics.

THE ENGLISH LANGUAGE.

The Comparative Study of Languages, as treated in Wiseman's Lectures on the connexion between Science and Revealed Religion, Lectures I., II. The History and Structure of the English Language, as treated in Craik's Manual of the English Language and Literature to Chaucer (inclusive).
Shakespeare—Macbeth.

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* Rev. T. K. Arnold's Introductory Works on Greek and Latin Prose Composition are recommended.

† Dr. William Smith's History of Greece is recommended.

‡ Liddell's Roman History is recommended.

§ Dr. William Smith's Handbook of Ancient Geography is recommended.

MODERN LANGUAGES.

French :—

Racine—Athalie, Andromaque, Acts I. and II.
Mignet—Révolution Française, Chap. VI. to end of the work.
An Extract from any other French Author.
French Grammar.
Outlines of French Literature.

Or,

German :—

Schiller—Wilhelm Tell, Acts I. and II., and Minor Poems.
German Grammar.
Outlines of German Literature.

HISTORY AND GEOGRAPHY.

As in the First Year.

COMPOSITION.

In Latin Verse, and in Greek, Latin, English, and French or German Prose.

SCIENCE SCHOLARSHIPS, SECOND YEAR.

MATHEMATICS.

The Course appointed for Science Scholarships of the first year.

Algebra :—

Nature and Simple Transformations of Equations; the Solution of Cubic and Biquadratic Equations; Method of Indeterminate Coefficients.

Geometry :—

Elements of Solid Geometry.

Trigonometry :—

Plane and Spherical.

Analytic Geometry :—

Discussion of the Equations of the Right Line and Circle.

The Professor's Lectures to the Class of the First Year.

SENIOR SCHOLARSHIPS.

The College is empowered to award Seven Scholarships, of the value of forty pounds each, by examination, to the most distinguished Students who shall have proceeded to the Degree of B.A., for proficiency in special departments of study. Of these Scholarships one is awarded for proficiency in each of the following departments :—

1. The Greek and Latin Languages, and Ancient History.
2. The Modern Languages, and Modern History.
3. Mathematics.
4. Natural Philosophy.
5. Metaphysical and Economic Science.
6. Chemistry.
7. Natural History.

I.—GREEK AND LATIN LANGUAGES, AND ANCIENT HISTORY.

The Greek Language :—

Thucydides—Book VI.
Plato—Theætetus.
Demosthenes—De Coronâ.
Pindar—Pythian Odes.
Aristophanes—The Clouds.
Odyssey, last 12 Books.
Translations from unprepared Greek.

The Latin Language :—

Cicero—De Finibus.
Tacitus—Annals, Books XII.–XVI.
Plautus—Pseudolus.
Juvenal and Persius.
Translations from unprepared Latin.
Composition in Greek and Latin Prose.

Ancient History :—

Grote's History of Greece, Chaps. LV.–LXVIII.
Mommsen's Roman History.
Mure's History of the Language and Literature of Greece.
Müller's History of Grecian Literature, continued by Donaldson, to the end of chap. xlii.

Appendix, No. 1.

II.—MODERN LANGUAGES AND MODERN HISTORY.

The English Language :—

Prof. Max Müller's Lectures on the Science of Language (First Series).
Johnson's Preface to Shakespeare.
Chaucer—Prologue of the Canterbury Tales.
Spenser—Fairy Queen, Book I.
Milton—Comus, L'Allegro and Il Penseroso.

The French Language :—

La Bruyère—Les Caractères.
Molière—Le Misanthrope.
Montesquieu—Grandeur et Décadence des Romains.
Corneille—Le Cid.
Extracts from writers of the present century.
History of French Literature.
French Composition.

The German Language :—

Schiller—Die Braut von Messina.
Lessing—Hamburgische Dramaturgie, from the beginning to 21st Stück; Laokoon.
Extracts from writers of the present century.
History of German Literature.
German Composition.

Modern History :—

Hallam's Middle Ages, Chaps. I. and II. (last edition, with the notes).
Lingard—History of England, from the Norman Conquest to the close of the reign of Henry VII.

III.—MATHEMATICS.

The Mathematical Course appointed for the Science Scholarship of the second year; theory of Algebraical Equations, including their numerical solution; Analytic Geometry of two and of three dimensions; Differential and Integral Calculus, including its application to Geometry.

IV.—NATURAL PHILOSOPHY.

Todhunter's Statics.
Tait and Steele's Dynamics, and Routh's Dynamics of a Rigid body.
Walton's Hydrostatical Problems.
Parkinson's Optics.
Hymer's Astronomy.
Jamin's Traité de Physique.
Lloyd's Lectures on the Wave Theory of Light.
The Professor's Lectures to the Honor Class of the Third Year.

V.—METAPHYSICAL AND ECONOMIC SCIENCE.

Metaphysics :—

Descartes—Discours de la Méthode, and Meditationes de Primâ Philosophiâ.
Locke and Kant—Philosophical Systems of.
Sir William Hamilton—Lectures on Metaphysics, Vol. II.
Archer Butler—Lectures on Aristotle.
Mansel—Prolegomena Logica.

Jurisprudence :—

Jurisprudence as treated in the Professor's Lectures.
Austin's Province of Jurisprudence, Lectures I., II., V., and VI., and Appendix.
Dumont's Bentham—Principes de Législation.
Stephens' (James Fitzjames) Criminal Law of England, omitting chap. VII., so far as p. 265, and from p. 338 to end.
Sandars' Institutes of Justinian, Introduction, and Books I. and II.
Maine's Ancient Law.

Political Economy :—

Political Economy, as treated in the Professor's Lectures.
Mill's Principles of Political Economy.
Smith's Wealth of Nations (omitting from the digression concerning the value of Silver, Book I., chap. xi., part 3, to the end of Book I., Book III., and chaps. iv.–ix. of Book IV.)

Political Economy—*continued.*

Ricardo's Political Economy, chapters VII. to XVI.
Senior's Political Economy.
Cairnes' Logical Method of Political Economy.
Göschen's Foreign Exchanges.

VI.—CHEMISTRY.

Theoretical Chemistry :—

The works of Graham, Kane, Miller, Gregory, and Regnault.
Liebig's Chemical Letters (third edition).
Ronalds and Richardson's edition of Knapp's Chemical Technology.

Practical Chemistry:—

Analysis, and an acquaintance with Manipulation to the extent to which it is carried out in the *Practical Course* prescribed for Medical Students will be considered the minimum. (Bowman's Introduction to Practical Chemistry is recommended.)

VII.—NATURAL HISTORY.

Henfrey's Botany.
Carpenter's Comparative Physiology.
Dallas's Animal Kingdom; Green's Manuals.
Whewell's Philosophy of the Inductive Sciences, Vol. I., Book VII., chap. i., Book VIII., chaps. i., ii., iv., Book IX., chap. vi.
Whewell's History of the Inductive Sciences, Vol. III., Books XVI., XVII.
Practical Examinations in Botany and Zoology.

PRACTICAL COURSE FOR COMMERCIAL AND GENERAL PURSUITS.

In order to extend the advantages of higher education to youths intended for commercial and general pursuits, the Senate has resolved to institute special courses of instruction, and to grant Diplomas, conferring the title of Licentiate in Arts, under the following conditions :—

1. To have matriculated in one of the Colleges of the Queen's University.
2. To have pursued, in one of the Colleges of the Queen's University, the course herein prescribed.
3. To have passed the University Examination herein prescribed.

The studies for the Diploma of Licentiate in Arts extend over two Sessions, and comprise attendance on the following Curriculum :—

First Session.

Two Languages, of which one may be English.
Mathematics.
Another Course on any subject in the annexed list.

Second Session.

Greek, Latin, or a Modern Continental Language.
Logic (one Term).
Natural Philosophy.
And two other Courses on subjects in the annexed list.

If any of the courses, except that on Logic, extend over one term only, some other course from the annexed list must be attended as a supplement to it, but not necessarily in the same Session.

Credit will not be given for attending the same course of Lectures a second time.

Attendance on the courses is, in all cases, understood to include passing such Examinations as the College Council shall appoint, and the catechetical parts of the courses of Lectures.

Candidates for the Diploma of Licentiate in Arts must reside at their respective Colleges during at least the first two terms of each Session.

After having completed the above curriculum, each Candidate for the Diploma is required to pass a University Examination in either Greek, Latin, or a Modern Continental Language; in Mathematical Science;

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and in two other subjects which he is allowed to select from the annexed list, viz. :—

- The Mathematical Sciences.
- The Experimental Sciences.
- The Natural Sciences.
- Geometrical Drawing.
- Mensuration, Levelling, and Mapping.
- Anatomy and Physiology.
- English Language and Literature.
- The Modern Continental Languages.
- Greek.
- Latin.
- Logic.
- Metaphysics.
- History.
- Political Economy.

English Composition forms a part of all University Examinations.

Licentiates in Arts who may desire to proceed to the Degree of Bachelor in Arts, may enter directly on the second Session in the course for this Degree, provided they attend in it, instead of the usual curriculum, all the courses prescribed for the first two years which they shall not have already attended in the curriculum for the Diploma of Licentiate.

In compliance with the first of the above specified conditions, the Council of the Queen's College, Galway, has instituted the following course for the Matriculation Examination :—

MATHEMATICS.

Arithmetic—Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.
Algebra—Including Fractions, Proportion, and the Solution of Simple Equations.
Geometry—Euclid, Books I., II.

GEOGRAPHY AND THE ENGLISH LANGUAGE.

Geography—Ancient and Modern, Outlines of.
Grammar—English Grammar and Composition.

FACULTY OF LAW.

Diploma of Elementary Law.

Candidates for the Diploma of Elementary Law are required to pass a Matriculation Examination in the following subjects :—

GREEK.

Xenophon—Anabasis, Book I.
Grammar.

LATIN.

One of the following authors :—

Cæsar—Gallic War, Book V.
Virgil—Æneid, Book I.

Retranslation from English into Latin of portions of Cæsar.

HISTORY AND THE ENGLISH LANGUAGE.

History—Outlines of Grecian and Roman History.
Geography—Outlines of Ancient and Modern Geography.
English—English Grammar and Composition.

MATHEMATICS.

Arithmetic—including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.
Algebra—including Fractions, Proportion, and the Solution of Simple Equations.
Geometry—Euclid, Books I., II.

Students who have passed the Matriculation Examination, and have pursued, during three years, the following courses of study, are admitted to Examination for the Diploma of Elementary Law :—

FIRST YEAR.

The Law of Property, and the Principles of Conveyancing.
Jurisprudence.

SECOND YEAR.

Equity and Bankruptcy.
Civil Law.

THIRD YEAR.

Common and Criminal Law.

JUNIOR SCHOLARSHIPS IN LAW.

Appendix, No. 1.

Of the three Junior Scholarships appropriated to the Faculty of Law, one is awarded to a Student of the First Year, one to a Student of the Second Year, and one to a Student of the Third Year.

SUBJECTS OF EXAMINATION.—FIRST YEAR.

LAW OF PROPERTY, &c.

Williams' Real Property.

JURISPRUDENCE AND CIVIL LAW.

Austin's Province of Jurisprudence. Lect. I.
Selections from the "Traité de Législation" of Dumont's Bentham, viz., "Principes de Législation" (omitting chaps. 6, 9, and 11).
Sandars' Institutes of Justinian, Introduction.
Maine's Ancient Law, chaps. II. and V.

SECOND YEAR.

All the business of the preceding Session.

EQUITY.

Smith's Manual of Equity Jurisprudence.

LAW OF PROPERTY, &c.

Williams' Personal Property; Smith's Lectures on the Law of Contracts.

JURISPRUDENCE AND CIVIL LAW.

The same as the course for the first year, together with

Austin's Province of Jurisprudence, Lectures V., VI., and Introduction.
Dumont's Bentham—"Principes du Code Civil," 1st and 2nd Parts.
Sandars' Justinian, Book I.
Stephens' Criminal Law of England, chaps. I., III., IV., V.
Maine's Ancient Law, chaps. VIII., IX., X.

THIRD YEAR.

All the business of the two preceding Sessions.

LAW.

Broom's Commentaries on the Common Law, Books II., III., and IV.
White and Tudor's Leading Cases in Equity, vol. I.

JURISPRUDENCE AND CIVIL LAW.

The same as the course for the second year, together with

Sandar's Justinian, Book II.
The remainder of Maine's Ancient Law.
The remainder of Stephens' Criminal Law of England (omitting chap. VII., so far as p. 265, and from p. 338 to the end).
Hallam's Middle Ages, chap. VIII.

THE DEGREES OF LL.B. AND LL.D.

Candidates for the Degree of LL.B. are admitted to Examination for that Degree from the Queen's University in Ireland, one year after they have obtained the Degree of B.A., and completed the above curriculum for the Diploma in Elementary Law.

Candidates for the Degree of LL.D. are admitted to Examination for that Degree from the Queen's University in Ireland, at the expiration of two years after they have obtained the Degree of LL.B.

SENIOR SCHOLARSHIP.

The College is empowered to award one Scholarship of the value of forty pounds, by Examination, to the most distinguished Student who shall have

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proceeded to the Degree of B.A., and who shall have completed the Course of legal study prescribed to candidates for the Degree of LL.B. The following is the course prescribed for Examination:—

JURISPRUDENCE AND CIVIL LAW.

The same as the course in these subjects for the Senior Scholarship in Arts (see p. 22).

PRINCIPLES OF CONSTITUTIONAL AND INTERNATIONAL LAW.

Hallam's Constitutional History of England; Kent's "Lectures on International Law" (prefixed to his "Commentaries"); Letters of "Historicus."

MEDICAL JURISPRUDENCE.

Works recommended—Smith's Analysis of Medical Evidence; Beck's Medical Jurisprudence; Taylor's Medical Jurisprudence; Orfila, Médecine Légale; Christison on Poisons; Abercrombie on the Intellectual Powers; Guy's Medical Jurisprudence; Sedillot, Manuel complet de Médecine Légale.

ENGLISH LAW.

All the business of the preceding Sessions.

LAW OF PROPERTY, &c.

All the business of the preceding Sessions:—

Jarman on Wills; Sugden on Powers; Taylor on Evidence.

PRIVILEGES OF LAW STUDENTS.

By the recent regulations of the Benchers of the King's Inns, candidates for the Bar who attend the Law Lectures in the Queen's Colleges, possess the same privileges as Students who attend the Lectures in Trinity College, Dublin.

Students intending to proceed for the Certificate of the Law Professors, so as to entitle them to serve an apprenticeship of *four* years instead of *five*, under the provisions of *an Act for amending the several Acts for the Regulations of Attorneys and Solicitors* (14 and 15 Vict., cap. 88), are required to enter their names with the Registrar, *either as Matriculated or Non-Matriculated* Students, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session.

Such Students are required to attend all the Lectures and pass all the Examinations prescribed for the first and second years of the course of study for candidates for the Diploma of Elementary Law.

FACULTY OF MEDICINE.

DEGREES OF M.D. AND M.CH.

Each Candidate for the Degree of Doctor in Medicine, or Master in Surgery, is required—

1. To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.
2. To have attended in one of the Queen's Colleges, lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.
3. To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk in the following list. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.
4. To pass two University Examinations—the first University Examination and the Degree Examination.

The curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination, prior to entering on the second period.

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It is recommended that the first period shall comprise attendance on the following courses of medical lectures :—

- *Chemistry.
- *Botany with Herborizations for practical study, and Zoology.
- *Anatomy and Physiology.
- *Practical Anatomy.
- *Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following courses of medical lectures :—

- Anatomy and Physiology (*second course*).
- Practical Anatomy (*second course*).
- *Theory and Practice of Surgery.
- *Midwifery.
- *Theory and Practice of Medicine.
- *Medical Jurisprudence.

In addition to the above courses of lectures, candidates shall have attended, during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).

Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

Practical Chemistry (in a recognised Laboratory).

Medico-Chirurgical Hospital (recognised by the Senate), containing at least sixty beds; together with the clinical lectures therein delivered, at least two each week—a winter session of six months.

And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the clinical lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of Labour under the superintendence of the Medical Officer of any hospital or dispensary where cases of labour are treated.

Medico-Chirurgical Hospital (recognised by the Senate), containing at least sixty beds; together with the clinical lectures therein delivered—eighteen months; including either three winter sessions of six months each, or two winter sessions of six months each, and two summer sessions of three months each.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each candidate for examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a candidate, along with his certificates; and each candidate for examination in September or October must forward similar notice, along with his certificates, on or before the first of September.

THE FIRST UNIVERSITY EXAMINATION IN MEDICINE.

The First University Examination may be passed either in June or September.

It is competent for Students to present themselves for the First University Examination at the termination of the first period of the curriculum, or at any subsequent period.

Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the course recommended for study during the first period of the curriculum.

The First University Examination comprises the subjects recommended for study during the first period of the curriculum, along with which any Candidate may present himself for examination in Experimental Physics and Modern Languages, if he have already attended in one of the Queen's Colleges the prescribed courses on these subjects.

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No. 1.

The course of Experimental Physics to be prepared is—

In Mechanics—Experimental proof of the parallelogram of forces; composition and resolution of parallel forces, conditions of equilibrium in the lever, wheel and axle, pulley, inclined plane, and screw; laws of motion—motion of falling bodies.

In Hydrostatics—Equilibrium of fluids; pressure of fluids on plane surfaces; methods of determining the specific gravity of solids, liquids, or gases; method of measuring the pressure of the atmosphere; Mariotte's law; construction and principle of syphon, barometer, manometer, air pump.

In Acoustics—Cause of sound; its propagation and velocity in solids, liquids, or gases; reflexion and refraction of sound; numerical evaluation of musical sounds; construction of syren; use of monochord.

In Heat.—Construction and use of thermometers and pyrometers; laws of the expansion of solids, liquids, and gases; fusion and solidification; specific heat; latent heat; action of freezing mixtures.

In Light.—Experimental proofs of laws of reflexion and refraction; formation of images by plane and spherical mirrors and by lenses; analysis of solar light; dispersion produced by a prism or lens; achromatic prism; achromatic lens; simple and compound microscope; polarization of light by reflexion; by transmission; colours of polarized light.

In Magnetism.—Natural and artificial magnets; neutral line and poles; mutual action of magnets; bypothesis of two magnetic fluids; magnetic induction; terrestrial magnetism; directive action of the earth; magnetic meridian; magnetic declination; inclination; intensity; methods of measuring their amount and variations.

In Electricity.—Development by friction; conductors and non-conductors; mutual action of bodies charged with electricity; measurement of electrical attractions and repulsions; theories of electricity; electrical induction; electroscopes and electrical machines; Leyden jar; properties of electricity—mechanical, thermal, chemical, magnetic, physiological.

Voltaic pile and its modifications; single and two fluid batteries; direction of current in battery; chemical, thermal, and luminous effects of battery; induction of currents by currents; mutual action of currents and magnets; galvanometers; application of electricity to telegraphy; induction coil.

The portions of Zoology to be prepared are—

a. The general characters of the classes of the Animal Kingdom.
b. The first principles of Animal Physiology.
c. The comparative Anatomy and Classification of either the *Vertebrate* or the *Invertebrate* Animals—whichever is selected by the candidate.
d. A special practical knowledge of the leading characters and classification of either some one Vertebrate class, or some one Invertebrate sub-kingdom.

Milne-Edwards' "Zoologie" is recommended as a text-book, or Dr. Knox's translation of it, published by Renshaw, London.

English Composition forms a part of all University Examinations.

Competitors for Honors will be examined in all the subjects of the First University Examination, including Experimental Physics and Modern Languages.

Two Exhibitions, one consisting of two instalments of £20 each, the other of two instalments of £15 each, will be awarded to the best answerers at the Honor Examinations, if they be recommended by the Examiners as possessed of sufficient absolute merit. Further regulations regarding these Exhibitions will be found in p. 40.

The candidates who pass with Honors will be arranged in three classes.

Candidates who postpone passing their First Medical Examination until they present themselves at the Degree Examination are not eligible for Honors with the First Examination.

Both Honor and Pass Examinations will be held in September. The Examination held in June is a Pass Examination.

Degree Examinations in Medicine.

Examinations for the Degrees of M.D. and M.Ch. will be held in June and September.

The Fee for each Degree is Five Pounds.

Each Candidate must be recommended by the President of his College, and produce certificates to the following effect :—

1. A certificate from the Secretary of the Queen's University, that he has passed the Previous Examination, unless the candidate present himself for both Examinations simultaneously.
2. From the Council of his College, that he has passed a full Examination in the subjects of study prescribed in the entrance Course of the Faculty of Arts, and has been admitted a Matriculated Student in the Faculty of Medicine.
3. That he has attended in the Colleges of the Queen's University two of the courses marked with an asterisk on p. 27, lectures on one Modern Language, and lectures on Experimental Physics.
4. Certificates that he has completed all other prescribed courses.

The Examination for the Degree of M.D. comprises the subjects recommended for study during the second period of medical education, along with Experimental Physics and one Modern Language, unless an Examination in these subjects shall have been already passed at the First University Examination.

The Examination for the Degree of M.Ch. comprises in addition an Examination in Operative Surgery.*

Candidates who graduate with Honors will be arranged in three classes. Candidates who take a First Class will receive a Medal and Prize. Candidates who take a Second Class will receive a Prize. Candidates who take a Third Class will receive a Certificate of Honor.

The Examination for the Degree with Honors will commence on the last Tuesday in September, and will be followed by the Examination of those candidates who seek to graduate without Honors.

The Examination held in June is a Pass Examination.

MATRICULATION.

Candidates for the Degree of M.D. in the Queen's University are required to pass a Matriculation Examination in the following subjects :—

GREEK.

Xenophon—The Anabasis, Book I.
Grammar.

LATIN.

One of the following authors :—

Virgil—Æneid, Book I.
Cæsar—Gallic War, Book V.
Retranslation from English into Latin of portions of Cæsar.

ENGLISH.

Grammar and Composition.

MATHEMATICS.

Arithmetic and Algebra :—

The First four Rules of Arithmetic ; Vulgar and Decimal Fractions ; the Rule of Three ; Addition, Subtraction, Multiplication and Division of Algebraical Quantities ; Simple Equations.

Geometry :—

Euclid, Book I.

HISTORY AND GEOGRAPHY.

History :—

Outlines of Grecian and Roman History.

Geography :—

Outlines of Ancient and Modern Geography.†

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* Candidates for the Degree of Master in Surgery, who obtained the Degree of M.D. in this University before the 1st of January, 1865, will be exempted from the Examination in Operative Surgery.

† Rev. T. K. Arnold's Handbooks are recommended.

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DAYS AND HOURS OF LECTURES.

	Subjects.	Months.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Period.	French, . . .	VI.	10	.	10	10	.	.
	German, . . .	VI.	.	2	.	2	.	.
	Botany and Zoology, .	VI.	.	11	.	11	10	11
	Experimental Physics, .	VI.	.	12	.	12	.	.
	Chemistry, . . .	VI.	12	.	12	.	12	12
	Logic, ...		1	.	1	.	1	.
	Anatomy and Physiology,		3	3	3	3	3	.
	Practical Anatomy, .		1	1	1	1	1	.
	Practical Chemistry, .		.	2	.	2	.	2
	Materia Medica, . .		.	4	.	4	.	4
2nd Period.	Practical Anatomy, .		1	1	1	1	1	..
	Anatomy and Physiology,		3	3	3	3	3	.
	Surgery, . . .		4	.	4	.	4	.
	Midwifery, . . .		2	.	2	.	2	1
	Medicine, . . .		.	2	.	2	.	2
	Medical Jurisprudence, .		4	.	4	.	4	.

The lectures of the Professors are fully recognised by the Queen's University, the Universities of Dublin, London, Edinburgh, Oxford, Glasgow, Durham; the University and King's College, Aberdeen; the College of Physicians, London; the Royal College of Surgeons in Ireland, England, and Scotland; the Faculty of Physicians and Surgeons, Glasgow; the Apothecaries' Halls of Dublin and London; the Army, Navy, and East India Medical Boards.

The hospitals in connexion with the College are in its immediate vicinity. They contain on an average two hundred patients, and are visited every morning by Professors of the College, who deliver clinical lectures. Attendance upon these hospitals and clinical lectures fully qualifies for the Royal Colleges of Surgeons of England, Ireland, and Scotland, as well as for the Queen's University.

The Anatomical Buildings within the College grounds contain a theatre for Demonstrations and a Dissecting Room, which affords every facility for study.

The Pathological Department of the Medical Museum has received a large and valuable accession of preparations and drawings, the collection of a late eminent teacher. It contains Wax Models representing Skin Affections, and Surgical Diseases both before and after operation. The Anatomical Department contains a variety of Osteological, Vascular, and other preparations, besides Casts and Models. Instruction in Microscopic Anatomy is given in the Physiological Class-room.

The Museum of MATERIA MEDICA contains a perfect collection of the medicines in the British Pharmacopæia, both pure and spurious, and of several foreign ones; of the ores and minerals that furnish medicines, prepared medical plants, and complete series of coloured botanical plates; various apparatus for the application of medical electricity and other operations in connexion with the Materia Medica and Pharmaceutical processes.

In the department of MEDICAL JURISPRUDENCE there are, in addition, the various poisons in their several forms and combinations, and a complete collection of tests and apparatus for exhibiting toxicological and other analyses, and microscopical investigations, &c.

The College has added to its means of teaching the collection of the late DOCTOR MONTGOMERY, formerly Professor of Midwifery in the King and Queen's College of Physicians in Ireland. It consists of above 600 specimens illustrative of:—

1st. The Anatomy and Physiology of the reproductive system, comparative and human.

2nd. Parturition and deviations from the natural process.

3rd. The diseases of pregnancy and of the puerperal state.

4th. Organic derangements unconnected with these conditions; and

5th. The Pathology of intra-uterine existence.

The Library of the College contains at present many thousand volumes, and additions are being constantly made. The Medical division comprises almost every work of note in each branch of Medical Science, together with a large collection of costly plates. There is also a Lending Library, from which Students are permitted to borrow books.

SCHOLARSHIPS.

Eight Junior Scholarships are appropriated to the Faculty of Medicine of the value of £25 each. Of these—

Two are allotted to Students of the			First Year.
Two	"	"	Second Year.
Two	"	"	Third Year.
Two	"	"	Fourth Year.

REGULATIONS RESPECTING MEDICAL SCHOLARSHIPS AND EXHIBITIONS.

(Scholars are required to pay only one-half of the ordinary class fee for each obligatory course of lectures.)

All Scholars and Exhibitioners are required to pass the Sessional Examination.

FIRST YEAR'S SCHOLARSHIPS.

All Students who have passed the Matriculation Examination may compete for the Scholarships of the first year.

For the one Scholarship the Examination will embrace the course prescribed for the Literary Scholarships of the first year, in the Faculty of Arts.

For the other Scholarship the course prescribed for Science Scholarships of the first year in the Faculty of Arts.

For these courses see p. 20.

If at either of these Examinations a competent candidate do not present himself, the Scholarship assigned to that department may be awarded to the other department, if there be in the latter a second candidate duly qualified.

A Student to whom a Scholarship of the first year has been awarded, shall attend the following courses:—

A Modern Language.
Natural Philosophy.
Anatomy.
Chemistry.
Botany and Zoology.

SECOND YEAR'S SCHOLARSHIPS.

A Candidate for second year's Scholarship may select for the subjects of his Examination, in addition to Anatomy and Physiology, or Practical Anatomy, any two or more of the following subjects. The value of each subject shall be estimated according to the number placed opposite to it in

Appendix, No. 1. the following list, and no mark under 100 shall be taken into account in any subject :—

Anatomy and Physiology, or Practical Anatomy,	1,000
Chemistry,	500
Botany and Zoology,	500
A Modern Language,	500
Natural Philosophy,	500
Materia Medica,	500

SUBJECTS OF EXAMINATION.

FRENCH.*

Mignet—Révolution Française, from Chap. VI. to the end of the work.
Racine—Athalie.
Outlines of French Literature.
Translation from English into French.

GERMAN.*

Schiller—Wilhelm Tell, Acts I. and II.; the Minor Poems.
Outlines of German Literature.
Translation from English into German.

NATURAL PHILOSOPHY.—Elements of Mechanics, Hydrostatics, Pneumatics, Optics, Heat, and Electricity.

ZOOLOGY.—Vertebrata.

BOTANY.—Structural and Physiological Botany; Principles of Classification; Characters of the Natural Orders yielding medicinal plants.

ANATOMY AND PHYSIOLOGY.—Histology, and Functions of the Viscera.

PRACTICAL ANATOMY.—Osteology and Arthrology.

MATERIA MEDICA.—Modifications of the action and doses of Medicines by age, sex, habit, &c.; Modes and forms of exhibiting Medicines; Heat in Pharmacy and Medical Practice; Medical Gums, Sugar, Starch, Oils; Alcohol for medical and pharmaceutical purposes.

CHEMISTRY.—General Principles of Chemical Philosophy; Laws of Combination by weight and volume; Atomic Theory; Nature of Salts, &c.; Chemistry of non-metallic bodies; Chemistry of Metals; Organic Chemistry.

A Student to whom a Scholarship of the second year has been awarded shall attend such of the medical courses assigned to the first period of the curriculum prescribed in the University regulations as he has not already taken. He shall also take a course of Modern Languages and of Natural Philosophy, if he have not previously done so in a Queen's College.

THIRD YEAR'S SCHOLARSHIPS.

To be allowed to compete for a Scholarship of the third year, a Student must have attended in a Queen's College, or in some University capable of granting Degrees in Arts, Law, and Medicine, four of the following courses :—

Anatomy and Physiology.
Chemistry.
Botany.
Zoology.
Practical Chemistry.
Practical Anatomy.
Materia Medica.

The Examination shall include the following subjects. The value of each shall be estimated by the number placed opposite it in the following list; and no mark under 300 shall be taken into account in either of the first named, nor under 200 in the last named :—

Practical Anatomy,	1,000
Materia Medica,	1,000
Practical Chemistry,	500

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* The candidate may select either French or German.

SUBJECTS OF EXAMINATION.

Practical Anatomy.—Bones, Joints, Viscera, and Brain.

During the Examination, Candidates may be called on to make dissections, or to describe structures placed before them.

Materia Medica.—Tonics, Astringents, Diaphoretics, Alkaloids, and Cathartics, Emmenagogues, Narcotics.

Symptoms indicating their unhealthy action, and treatment to counteract such action.

Practical Chemistry.—As taught in the class.

A Student to whom a third year's Scholarship has been awarded, shall attend, during the year of his election, four at least of the courses prescribed for the second period in the University regulations.

Fourth Year's Scholarships.

To be allowed to compete for a Scholarship of the fourth year, the candidate must have attended all the strictly professional courses of the first period, and must have attended in a Queen's College, or a University capable of granting Degrees in Arts, Law, and Medicine, three at least of those of the second period prescribed in the regulations of the Queen's University.

A candidate for fourth year's Scholarship may choose any four of the following subjects, provided he has attended lectures upon them, as those in which he shall be examined. The value of each subject shall be estimated by the number assigned to it in the following list, and no mark under 300 shall be taken into account:—

Anatomy and Physiology, ...	1,000
Practical Anatomy, ...	1,000
Theory and Practice of Surgery, . .	1,000
Midwifery and Diseases of Women and Children,	1,000
Theory and Practice of Medicine, . .	1,000
Medical Jurisprudence, ...	1,000
Materia Medica, ...	1,000

SUBJECTS OF EXAMINATION.

Anatomy and Physiology.—Histology, Physiology, and Development. Candidates may be required to name objects under the Microscope.

Practical Anatomy.—Topographic and Surgical Anatomy. Candidates will be required to make dissections, or describe structures placed before them.

Therapeutics and Pathology.—1. Candidates must be prepared to answer in any part of the previous course of lectures in Materia Medica; Poisonous actions of Medicaments; symptoms and tests. They will also be required to write prescriptions in proper form on given subjects.

2. Diseases of the brain and nervous system.

3. Injuries of the Head; diseases of the Rectum; amputation of the Foot.

4. Anatomy and Physiology of Gravid womb throughout Mammalia; diseases of parturient women; diseases of childhood.

A Student to whom a Scholarship of the fourth year has been awarded shall attend during the year of his election two at least of the practical courses prescribed for the second period in the University regulations; and if more courses are required to complete the curriculum, both as to professional and non-professional subjects, he shall also attend them.

Non-Matriculated Students.

Any course or courses of lectures may be attended by Non-Matriculated Students, without passing any examination, on paying the regulated class fee to each Professor whose lectures they attend. Such Students are admissible to the Library on payment of a fee of Fifteen Shillings for the year.

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SCHOOL OF CIVIL ENGINEERING.

Candidates for the Diploma in Civil Engineering are required:—

1. To have been admitted Matriculated Students of one of the Colleges of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of the Queen's University the course herein prescribed.
3. To have passed two University Examinations.

Candidates for Matriculation are examined in the following subjects:—

MATHEMATICS.

Arithmetic:—

Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root.

Algebra:—

Including Fractions, Proportion, and the Solution of Simple Equations.

Geometry:—

Euclid, Books I., II., III., VI., with Definitions of Book V.

HISTORY, GEOGRAPHY, AND THE ENGLISH LANGUAGE.

History:—

Outlines of Ancient History.

Geography:—

Outlines of Ancient and Modern Geography.

English:—

English Grammar and Composition.

The course for the Diploma in Civil Engineering usually extends over three Sessions, and comprises attendance on the following curriculum:—

FIRST SESSION.

Mathematics (first course).
Chemistry.
A Modern Language.
Geometrical Drawing.
Office Work.

SECOND SESSION.

Mathematics (second course).
Mathematical Physics.
Experimental Physics.
Mineralogy, Geology, and Physical Geography.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy (applied).
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these courses in all cases includes passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the courses of lectures.

Engineering Students must reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Diploma after two year's residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the first and second Sessions is deemed by the Council satisfactory. In such cases the certificate of the Council will be accepted in lieu of attendance upon these courses, but will not exempt candidates from the University Examinations in them.

Candidates for the Diploma in Civil Engineering are required to pass two University Examinations,—the First University Examination which is held simultaneously in each of the Colleges of the University, and the Diploma Examination which is held in the Hall of the University in Dublin.

Students who have completed their second Session must attempt the First University Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have attempted, but failed to pass, the First University Examination in October, will be admitted to a Supplementary Examination.

FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

The course for the First University Examination includes French; Geometrical Drawing; Mathematics (first course); Mathematics (second course); Mensuration, Levelling, and Mapping; Experimental Physics.

The Examination will be held shortly after the commencement of the College Session, upon days which will be appointed before the 1st of October.

Each candidate must forward to the Secretary, on or before the 1st of October, notice of his intention to offer himself as a candidate, and will thereupon receive intimation of the days upon which his Examination will be held.

The candidates who pass with Honors will be arranged in three classes, the names in each class being placed alphabetically.

Two Exhibitions, one of the annual value of £20 for two years, the other of the annual value of £15 for two years, will be competed for at the Honor Examination. For the regulations regarding these Exhibitions see p. 40.

EXAMINATION FOR THE DIPLOMA IN CIVIL ENGINEERING.

The Examination for the Diploma in Civil Engineering will embrace the following course:—Engineering; Mensuration, Levelling and Mapping; Mathematical Physics; Natural Philosophy, applied; Chemistry; Mineralogy, Geology, and Physical Geography. Each candidate will also be required to produce at this Examination the Field-notes and Drawings of a Survey made by him.

Candidates who have completed the Engineering Course may present themselves as candidates for the Diploma, either with Honors or without Honors.

The Examinations for the Diploma in Civil Engineering will commence on the last Tuesday in September, and end on the second Tuesday in October. The Honor Examination will precede the Pass.

Each Candidate must forward to the Secretary, on or before the 1st of

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September, notice of his intention to offer himself as a candidate, and will thereupon receive intimation of the days upon which his Examination will be held.

The candidates who pass with Honors will be arranged in three classes; the names in each class will be placed alphabetically.

Candidates who take a First Class will receive a Medal and Prize.

Candidates who take a Second Class will receive a Prize.

Candidates who take a Third Class will receive a Certificate of Honor.

Candidates are recommended to provide themselves with drawing instruments and materials, viz. :—a T square; pair of set squares; pair of compasses, with pen and pencil legs; drawing-pen; 12-inch scale, divided on one edge decimally to two chains to an inch, and on the other side, duodecimally to five feet to an inch; an offset scale 20 and 40; also pencils, papers, colours, &c.

Days and Hours of Lectures.

	Subjects.	Terms.	Mon.	Tues.	Wed.	Thurs.	Friday.	Sat.
1st Year	French,	1, 2, 3,	10	.	10	10	.	.
	Chemistry,	1, 2, 3,	12	.	12	.	12	.
	Mathematics (pass),	1, 2, 3,	1	.	1	.	1	.
	Mathematics (honor),	1, 2, 3,	.	1	.	1	.	.
	Geometrical Drawing,	1, 2, 3,	11	.	11	.	11	.
	Office Work,	1, 2, 8,	2	.	2	.	2	.
2nd Year	Civil Engineering,	1, 2, 3,	10	.	10	.	10	.
	Office Work,	1, 2, 3,	2	.	2	.	2	.
	Mineralogy, &c.,	1, 2, 3,	1	.	1	.	1	.
	Mathematical Physics (pass),	.	12	.	12	.	.	.
	Experimental Physics (pass),	1, 2, 3,	.	12	.	12	.	.
	Experimental Physics (honor),	1, 2, 3,	11	.	11	.	.	.
	Mathematical Physics (honor),	1, 2, 3,	.	2	.	2	.	.
	Mathematics (honor),	1, 2, 3,	12	.	12	.	12	.
	Mathematics (pass),	1, 2, 3,	.	1	.	1	.	.
3rd Year	Civil Engineering,	1, 2, 3,	3	.	3	.	3	.
	Office Work,	1, 2, 3,	2	.	2	.	2	.
	Natural Philosophy (applied),	1, 2, 3,	.	11	.	.	.	11

SCHOLARSHIPS.

Of the five Scholarships appropriated to the Department of Engineering, two are awarded to Students of the first year, two to Students of the second year, and one to a Student of the third year.

Subjects of Examination.—First Year.

The course prescribed for Science Scholarship of the first year.

For this course, see p. 18.

Second Year.

The course of Elementary Mathematics prescribed for the Science Scholarship of the second year, together with the courses of Chemistry, Modern Languages as prescribed for Literary Scholarship of second year, Office Work, and Geometrical Drawing prescribed in the course for Students in Engineering of the first year.

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Third Year.

The courses of Mathematics, Mathematical and Experimental Physics, Mineralogy and Geology, Engineering and Office Work, prescribed to Honor Students of the second year.

PUBLIC COMPETITIVE EXAMINATIONS.

The Indian Civil Service.

The appointments to the Indian Civil Service have been thrown open to public competition, and are given by Examinations held under the Civil Service Commissioners.

For the subjects of Examination, and the marks allotted to each, and for the conditions under which candidates may present themselves, *see* p. 41.

As the Committee, upon whose suggestions the course was framed, contemplate that the candidates for examination for the above appointments will be, for the most part, successful competitors for the highest Collegiate and University distinctions, and anticipate that such candidates will be found to have in general aimed at attaining remarkable proficiency in some subjects of examination to the exclusion of others, classes suited to such advanced Students have been opened in Queen's College, Galway, in the following branches:—

English Language and Literature.—Composition, English Literature and History, including that of the Laws and Constitution. The Professor of History and English Literature will deliver two advanced courses on these subjects.

Language, Literature, and History of Greece.—Two advanced courses will be delivered by the Professor of Greek, embracing all the great departments of Grecian Literature. Minute attention will be given to Grammatical Analysis, and to the Theory and Practice of Composition in Prose and Verse.

Language, Literature, and History of Rome.—Two advanced courses will be delivered by the Professor of Latin, embracing all the great departments of Roman Literature. Minute attention will be given to Grammatical Analysis, and to the Theory and Practice of Composition in Prose and Verse.

Language, Literature, and History of France—Language, Literature, and History of Germany.—The Professor of Modern Languages delivers, every Session, five courses of lectures on the Language, Literature, and History of France and Germany.

Mathematics, Pure and Mixed—Four advanced courses will be delivered by the Professors of Mathematics and Natural Philosophy, embracing the following branches, so far as the attainments of the classes will permit:—

Pure Mathematics:—

Differential and Integral Calculus; Calculus of Variations; Calculus of Operations; Calculus of Differences; Analytic Geometry of two and three dimensions; Pure Geometry of two and three dimensions.

Mixed Mathematics:—

Mechanics (Duhamel's Mécanique and Lagrange's Mécanique Analytique).—Astronomy—Lunar and Planetary Theories, Tides, Precession and Nutation; Figure of the Earth (Newton's Principia, and Pratt's Mechanical Philosophy).

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Natural Sciences—Chemistry.—A laboratory course may be taken out under the instruction of the Professor and his Assistant, in addition to the general course.

Electricity and Magnetism.—An advanced course of lectures will be delivered on Experimental Physics, embracing Electricity and Magnetism, Heat, Light, and Sound.

Natural History, Geology, and Mineralogy.—The usual courses of the Professors of Natural History, and of Geology and Mineralogy, will be found sufficient.

Moral Sciences.—The Professor of Logic and Metaphysics will deliver two advanced courses of lectures—one on Logic, Deductive and Inductive, and one on Moral and Political Philosophy. The Students will also be exercised in oral examination on standard authors, and in the writing of essays on the objects of the course.

Students may select at their option any of the above courses.

Fee for attendance on each course, £2, with the exception of the laboratory course in the Chemical Department, the fee for which depends on the time spent by the Student in the Laboratory.

An annual fee of Five Shillings to be paid to the College by each Student in addition to the class fees.

Indian Engineering Establishment.

For the regulations for the Competitive Examination for appointments in the Indian Engineering Establishment see Appendix.

Two of the three years which candidates for the Civil Engineering Department of the Indian Service are required to pass in the office of a Civil Engineer are dispensed with in favour of Students who have studied for two years in the Engineering School of this College.

A highly advantageous arrangement has been made to enable such candidates to complete their qualifications by passing a year in the office of a Civil Engineer.

EXAMINATIONS FOR APPOINTMENTS IN THE HOME CIVIL SERVICE AND FOR DIRECT APPOINTMENTS TO THE ADVANCED OR PRACTICAL CLASS OF THE ROYAL MILITARY ACADEMY AT WOOLWICH.

Classes have been formed in the Queen's College, Galway, for the purpose of preparing Students for the Examinations prescribed for the appointments above mentioned.

Gentlemen intending to join these classes may obtain the requisite information on application to the Registrar, Queen's College, Galway.

APPENDIX.

PRIZES FOUNDED BY PUBLIC SUBSCRIPTION.

At a public meeting of the University in October, 1861, Sir Robert Peel offered the sum of £1,200 to found three exhibitions* of £40 each, to be competed for annually for ten years; and he expressed his desire that these prizes should be tenable along with the small Scholarships attached to the Queen's Colleges, in order that his benefaction might have the effect of increasing the value of the rewards provided for the most deserving students.

When announcing this munificent gift, Sir Robert Peel invited others to co-operate with him in thus endeavouring to promote United Education, without adding to the burden on the public purse; and his invitation met with so ready a response, that it became necessary to form a Committee, which should take charge of the subscriptions, and make regulations for the proper allocation of the funds. This Committee consisted of Sir Robert Peel, Bart., M.P. (*Chairman*); the Duke of Leinster; the Lord Talbot de Malahide, F.R.S.; the Right Honorable Abraham Brewster, M.A., Q.C.; Sir James Emerson Tennent, LL.D.; James Naper, D.L.; Alexander Thom, Esq.; Benjamin Lee Guinness, Esq.; William Malcomson, Esq.; and G. Johnstone Stoney, M.A., F.R.S. (*Honorary Secretary*).

Prizes which have been Founded.

This munificence on the part of the public has enabled the Committee to found the following prizes, to be competed for annually for ten years; and to place at interest a considerable sum,† which will accumulate and form the nucleus of a fund for continuing these most useful aids to learning beyond that time.

Exhibitions in the Faculty of Arts.

Three exhibitions of £20 a-year for three years, three exhibitions of £15 a-year for three years, and two exhibitions of £10 a-year for three years, will be competed for annually in the Faculty of Arts. The three £20 exhibitions will be awarded to the candidates who stand foremost in order of merit from each College at the First University Examination in Arts; and the three £15 exhibitions to the candidates who stand second in order of merit from each College; provided that their names appear in the First Class of the division list at that examination. Of the two £10 exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics at the First University Examination. The £10 exhibitions are open to the competition of candidates from all the Colleges, and may be held along with one of the larger exhibitions.

Each candidate will be deemed a Student of that College in which he shall have attended the Lectures of the Second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

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* This allocation was afterwards changed, and Sir Robert Peel's benefaction merged in the general fund, in order that it might aid in establishing the connected series of prizes which the support of the public has enabled the Committee to found.

† £1,980 has been already invested, and the sum reserved for accumulation will probably be soon raised to £3,000. It is the intention of the Committee to add to the reserve fund whatever further sums may be at their disposal from lapsed exhibitions or other sources; as it is very important that the assistance which is now being afforded for ten years to students in the Queen's Colleges should not be allowed to come abruptly to an end at the close of that period.

The first instalment of each exhibition will be paid at the time of competition; the second when the exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

Exhibitions in the Faculty of Medicine.

Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the First University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the division list at that examination.

Each candidate will be deemed a student of that College in which he shall have attended the lectures of the Second Session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Exhibitions in the School of Engineering.

Two exhibitions, one of £20 a-year for two years, and the other of £15 a-year for two years, will be competed for annually in the School of Engineering. These exhibitions will be awarded at the First University Examination in Engineering: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the division list at that examination.

Each candidate will be deemed a student of that College in which he shall have attended the lectures of the Second Session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The first instalment of each exhibition will be paid at the time of competition; the other when the exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

Prizes in Composition, open to the competition of Graduates and Undergraduates.

Two prizes for English prose composition, one of £10 worth of books, and the other of £5 worth of books, have been founded, and are open to the competition of all members of the University who shall not have been graduated for more than three years at the time of competition, and who shall not have already twice obtained one or other of these prizes.

Prizes in Composition, open to the competition of all Undergraduates.

Two prizes in composition, one for English prose, the other for Greek or Latin prose, and each consisting of £5 worth of books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical prize be awarded oftener than twice to any student.

Prize in Composition, limited to the competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next public meeting of the University.

Prizes at Entrance.

Two prizes for English prose composition, and two prizes for Geometry, have been founded in each College, to be awarded annually at entrance: first prize for English prose composition, £3 worth of books; second do., £2 worth of books: first prize for Geometry, £3 worth of books; second do., £2 worth of books.

All the exhibitions and prizes now founded by public subscription shall be tenable along with any other scholarships, exhibitions, or prizes to which the successful competitors may be otherwise entitled.

Persons who wish to add to this Fund may find the following forms of use:—

FORM OF DONATION.

I enclose   Pounds sterling, and desire that this sum be expended in founding Exhibitions or other Prizes to encourage learning and promote industry among the Students and Graduates of the Queen's University in Ireland.

Dated at   this   day of   , 186
(Signed),

To the Right Honorable
Sir ROBERT PEEL, Bart.,
Chairman of the Committee for augmenting the Endowments of the Queen's Colleges.

FORM OF SUBSCRIPTION FOR A TERM OF YEARS.

I enclose   as the First Instalment of my Subscription to the *Fund for the Endowment of Prizes, in connexion with the Queen's University in Ireland*, and I will cause an equal sum to be lodged in the Bank of Ireland to the credit of the same Fund, before the first of January in *each* of the next   years.

Dated   this   day of   , 186
(Signed),

To the Right Honorable
Sir ROBERT PEEL, Bart.,
Chairman of the Committee for augmenting the Endowments of the Queen's Colleges.

EXAMINATIONS FOR THE CIVIL SERVICE OF INDIA.

REGULATIONS for the OPEN COMPETITION of 1866.*

1. On Monday, March 19, 1866, and following days, an examination of candidates will be held in London. Not less than   candidates will be selected, if so many shall be found duly qualified. Of these,

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* The regulations are liable to be altered in future years.

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will be selected for the Presidency of Bengal [for the Upper Provinces, and for the Lower Provinces], for that of Madras, and for that of Bombay.*—Notice will hereafter be given of the days and place of examination.

2. Any natural-born subject of Her Majesty, who shall be desirous of entering the Civil Service of India, will be entitled to be examined at such examination, provided he shall, on or before the 1st February, 1866, have transmitted to the Civil Service Commissioners, Dean's Yard, London, S.W. :—

(*a.*) A certificate of his birth, showing that his age on the 1st March, 1866, will be above seventeen years and under twenty-one years.

(*b.*) A certificate, signed by a physician or surgeon, of his having no disease, constitutional affection, or bodily infirmity, unfitting him for the Civil Service of India.

(*c.*) Satisfactory proof of good moral character.

(*d.*) A statement of those of the branches of knowledge hereinafter enumerated in which he desires to be examined.†

3. In any case in which a doubt may arise as to the eligibility of a candidate in respect of age, health, or character, such inquiries as may be necessary will be instituted by the Civil Service Commissioners.

4. The examination will take place only in the following branches of knowledge ‡ :—

	Marks.
English Language and Literature :—	
Composition,	500
English Literature and History, including that of the Laws and Constitution,	1,000
	1,500
Language, Literature, and History of Greece,	750
” ” Rome,	750
” ” France,	375
” ” Germany,	375
” ” Italy,	375
Mathematices, Pure and Mixed,	1,250
Natural Science; that is, (1.) Chemistry, (2.) Electricity and Magnetism, (3.) Natural History, (4.) Geology, and (5.) Mineralogy, ⁂ No candidate will be allowed to be examined in more than three of the branches of knowledge included under this head, and the total (500 marks) may be obtained by adequate proficiency in any one.	500
Moral Sciences; that is, Logic, Mental and Moral Philosophy,	500
Sanskrit Language and Literature,	375
Arabic Language and Literature,	375
	7,125

5. The merit of the persons examined will be estimated by marks, and the number set opposite to each branch in the preceding regulation denotes the greatest number of marks that can be obtained in respect of it.

6. No candidate will be allowed any marks in respect of any subject of

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* The number of appointments to be made, and the number in each Presidency, &c., will be announced hereafter.

† Candidates are at liberty to send in their names and evidence of age as soon as they think fit to do so; but evidence of health and character must bear date not earlier than the 1st January, 1866.

‡ It should be understood that candidates are at liberty to name at their pleasure any or all of these branches of knowledge (subject only to the restriction above mentioned as to Natural Science), and that no subjects are *obligatory*.

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examination unless he shall be considered to possess a *competent knowledge* of that subject.*

7. The examination will be conducted by means of printed questions and written answers, and by *vivâ voce* examination, as may be deemed necessary.

8. The marks obtained by each candidate, in respect of each of the subjects in which he shall have been examined, will be added up, and the names of the candidates who shall have obtained a greater aggregate number of marks than any of the remaining candidates will be set forth in order of merit, and such candidates shall be deemed to be selected candidates for the Civil Service of India. They shall be permitted to choose, according to the order in which they stand, as long as a choice remains, the Presidency (and in Bengal, the division of the Presidency) to which they shall be appointed.

9. Selected candidates before proceeding to India will be on probation for two years, during which time they will be examined periodically with the view of testing their progress in the following subjects † :—

	Marks.
1. Oriental Languages :—	
Sanskrit,	500
Vernacular Languages of India (each),	400
2. The History and Geography of India,	350
3. Law,	1,250
4. Political Economy,	350

In these examinations, as in the open competition, the merit of the candidates examined will be estimated by marks, and the number set opposite to each subject denotes the greatest number of marks that can be obtained in respect of it at any one examination. The examination will be conducted by means of printed questions and written answers, and by *vivâ voce* examination, as may be deemed necessary. The marks obtained at each of such periodical examinations will be added to those previously or subsequently obtained. The last of these examinations will be held at the close of the second year of probation, and will be called the "Final Examination," at which it will be decided whether a selected candidate is qualified for the Civil Service of India.

10. No candidate will be permitted to proceed to India until he shall have passed the Final Examination, and received a certificate of qualification from the Civil Service Commissioners, or after he shall have attained the age of twenty-four years.

11. The selected candidates who at the Final Examination shall be found to have a competent knowledge of the subjects specified in Regulation 9, shall be adjudged to have passed, and to be entitled to be appointed to the Civil Service of India.

12. The seniority in the Civil Service of India of the selected candidates shall be determined according to the order in which they stand on the list resulting from the Final Examination.

13. No person will, even after passing the Final Examination, be allowed to proceed to India unless he shall comply with the regulations in force at the time for the Civil Service of India, and shall be of sound bodily health and good moral character. The Civil Service Commissioners

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* "Nothing can be further from our wish than to hold out premiums for knowledge of wide surface and of small depth. *We are of opinion that a candidate ought to be allowed no credit at all for taking up a subject in which he is a mere smatterer.*"—Report of Committee of 1854.

† Full instructions as to the course of study to be pursued will be issued to the successful candidates as soon as possible after the result of the open competition is declared.

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will require such further evidence on these points as they may deem necessary before granting their certificate of qualification.

14. Applications from persons desirous to be admitted as candidates are to be addressed to the Secretary to the Civil Service Commissioners, Dean's Yard, London, S.W.

NOTE.—(1.) The Secretary of State for India in Council has authorized the Civil Service Commissioners to state that it is his intention to allow the sum of £100 for the first year of probation, and £200 for the second year to each selected candidate who shall have passed the required examinations to the satisfaction of the Commissioners, and shall have complied with such rules as may be laid down for the guidance of selected candidates.

(2.) All selected candidates will be required, at the commencement of the second year of probation, to attend at the India Office, to make the necessary arrangements for entering into covenants (binding themselves, amongst other things, to refund in certain cases the amount of their allowance in case of their failing to proceed to India), and for giving a bond for £1,000, jointly with two sureties, for the due fulfilment of the same. The stamps payable by civilians on their appointment amount to £3 10s.

(3.) Candidates rejected at the Final Examination of 1868 will in no case be allowed to present themselves for re-examination.

Competitive Examination of Candidates for Junior Appointments in the Engineer Establishment of the Department of Public Works in India, to be held at the India Office in London, in July, 1866.

Candidates must be British subjects, and must not have passed their twenty-fourth birthday (in proof of which a satisfactory certificate must be produced), and they must have complied with one or other of the three following conditions:—

1. They must have passed not less than three years as Articled Pupils of a Civil, Mechanical, or Mining Engineer; or,
2. Not less than three years in practice under a Civil, Mechanical, or Mining Engineer; or,
3. Not less than three years altogether, of which part may have been passed in practice under a Civil, Mechanical, or Mining Engineer, and part in studying Civil, Mechanical, or Mining Engineering, in a School or College recognised by the Secretary of State as possessing an efficient class for instruction in one or other of those professions, with the proviso that one year at least of the three must have been passed in practice under a Civil, Mechanical, or Mining Engineer.

On these points also they must be provided with satisfactory certificates, and they must likewise produce testimonials of good moral character and conduct from the engineers or professors under whom they have served, or by whom they have been instructed.

These documents must be delivered at the Department of Public Works in this Office between the 1st and 30th days of June next, both inclusive, during which period only will applications be received.

The names of the candidates will then be registered, and they will be directed to appear for medical examination before the Indian Medical Board, on the first Saturday in July, between the hours of 1 and 3 P.M.

If then certified to be constitutionally fit for service in India, they will be required to attend, at 9 A.M. precisely, on the succeeding Monday and five following days at a competitive examination which will be held in this office.

The candidates will first be required to write English from dictation, and unless found able to do so with accuracy and facility, will not be permitted to remain during the subsequent examination. The other subjects

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of examination and the maximum number of marks obtainable for proficiency in each class of subjects will be the following :—

MATHEMATICS.	
Arithmetic, Mensuration, and *Trigonometry,* including heights and distances,	220
Algebra: Elementary Principles; Simple and Quadratic Equations; Surds; Ratios and Proportion; Arithmetical and Geometrical Progression; Combinations, and the Binomial Theorem,	
Euclid: 1st, 2nd, 3rd, 4th, 6th, and first 21 Propositions of the 11th Book,	
Statics: Composition and Resolution of Forces, the Centre of Gravity, the Mechanical Power; Roofs, Arches, and Bridges; Strength of Materials; and Friction,	180
Dynamics: First Principles; Collision of Bodies; Uniformly Accelerated Motion; Circular Motion and Centrifugal Force; Labour and Machinery,	
Hydrostatics and *Hydraulics:* Pressure of Fluids; Specific Gravity, and Equilibrium of Floating Bodies; Elastic Fluids and Atmospheric Pressure; Hydrostatic Machines,	
ENGINEERING.	
Projects for Bridges, Locks, Dams, Roads, and other Engineering Works,	280
Making Working Drawings of Machinery and Plans, Elevations and Sections of Buildings,	
Carpentry, Ironwork, and Properties of Materials in general,	
Free-hand Drawing,	
Map Drawing,	
Framing of Estimates and Specifications from given plans and data,	80
SURVEYING.	
Trigonometrical Surveying and traversing with the Theodolite,	240
Land Surveying with Compass and Chain, and Plotting from a Field-Book,	
Levelling and Use of the Instruments employed,	
Geometrical Drawing,	
	1,000

No candidate will be passed who shall not obtain 600 marks, of which not less than 200 must be awarded for Mathematics, not less than 180 for Engineering, and not less than 100 for Surveying. The candidates who may obtain the prescribed minimum number of marks will be ranked by the Examiners in the order of the numbers they may severally obtain; and of these the ten who may stand highest on the list will be appointed "Assistant Engineers of the third grade," and will be considered on probation for the first twelve months.

Each Probationary Assistant Engineer must, within a month of his nomination, sign a covenant, describing the terms and conditions of his appointment, and must embark for India, when required to do so by the Secretary of State in Council, who will provide for the expenses of his passage. Any nominee not embarking, when required, will forfeit his appointment. Otherwise he will be allowed pay, at the rate of 170 rupees (which is about the equivalent of £17 in English money) a month from the date of his appointment.

On arriving in India, he will, at the discretion of the Local Government, either be placed in a Civil Engineering College, or other educational institution, in order to acquire a colloquial knowledge of one of the native languages, and to receive further instruction in his profession, or be at once employed as a Civil Engineer.

India Office, 25th July, 1865.

N.B.—The papers given at former examinations have been printed by order of the House of Commons, and may be obtained from Messrs. Hansard, of Great Queen-street, Lincoln's-Inn-Fields.

Appendix, No. 1.

COMPETITIVE EXAMINATION of CANDIDATES for appointment as ASSISTANT SUPERINTENDENTS of the FOURTH GRADE in the TELEGRAPH DEPARTMENT in INDIA, to be held in LONDON, in JUNE, 1866.

Candidates must be native British subjects, and not less than eighteen nor more than twenty-four years of age, and must have complied with one or other of the three following conditions:—

1. They must have passed not less than two years in the service of one of the English Telegraph Companies, or of a Foreign Telegraphic Administration ; or,
2. Not less than two years as articled pupils of, or in practice under, a Telegraphic Engineer ; or,
3. Not less than two years in a school or college recognised by the Secretary of State as possessing an efficient class for instruction in Chemistry and Physics, and during six months of that period must have given special attention to those subjects.

On these points they must be provided with satisfactory certificates, which must be delivered at the Department of Public Works in this Office between the 1st and 26th days of May next, both inclusive, between which days only will applications be received.

The names of the candidates will then be registered, and they will be directed to appear for medical examination before the Indian Medical Board, on Saturday, the 2nd of June, between the hours of 1 and 3, P.M.

If then certified to be of constitutions sufficiently vigorous to bear the fatigue and exposure to which they would be liable when serving in India, they will be required to attend, at 9, A.M. precisely, on the succeeding Monday and following days, at a competitive examination, which will be held in this Office.

The candidates will first be required to write English from dictation, and unless found able to do so with accuracy and facility, will not be permitted to remain during the subsequent examination. The other subjects of examination and the maximum number of marks obtainable for proficiency in each class of subjects will be the following :—

	Marks.
1. *Arithmetic, Book-keeping* by single and double entry, *Mensuration*, .	1,000
2. *Euclid* : 1st, 2nd, and 3rd Books, and *Algebra*, including simple and quadratic equations, ...	1,000
3. *Geography, Plane Trigonometry*, including practical knowledge of methods for heights and distances, *Use of the Logarithmic and Trigonometrical Tables*, ...	1,000
4. *Dynamics*, including *Statics*, ...	1,500
5. *Elements of Physics*, including *Electricity and Elements of Chemistry*, .	1,500
6. *Theory of Electricity*; and *Telegraphic Testing*, ...	3,000

No candidate will be passed who shall not obtain 2,000 marks, of which not less than 1,000 must be awarded for Dynamics and Physics. The candidates who may obtain the prescribed minimum number of marks will be ranked by the Examiners in the order of the numbers they may severally obtain ; and of these the twenty-five who may stand highest on the list will be appointed.

The successful candidates must, within a month of their nomination, sign covenants, describing the terms and conditions of their appointment, and must embark for India, when required to do so by the Secretary of State in Council, who will provide for the expenses of their passage. Any nominee not embarking when required will forfeit his appointment.

India Office.

Appendix, No. 1.

INDIAN TELEGRAPH DEPARTMENT.

Present Classification of Appointments above the Grade of Signaller.

No. of Officers.	Grade.	Monthly Pay of each Officer.
		Rs.
1	Director General, . .	3,000.
1	Scientific Assistant to do. .	From 1,000 to Rs. 1,500.
1	Director of Division, .	1,000 increasing by annual additions of Rs. 100 per mensem, to a maximum of Rs. 1,500.
2	" " . .	700 " by annual additions of Rs. 50 per mensem, to a maximum of Rs. 1,000.
1	Superintendent of Circle, .	700.
2	" " .	600.
4	" " .	500.
5	" " .	400.
3	" " .	350.
15	Assistant Superintendents of the First Grade,	300.
20	" of Second Grade,	250.
30	" of Third Grade,	200.
40	" of Fourth Grade,	150.

RULES of the HONORABLE SOCIETY of KING'S INNS, with regard to the ADMISSION of STUDENTS into the SOCIETY, and to the DEGREE of BARRISTER-AT-LAW.

I.—Every person desirous to be admitted a Student into this Society shall, in order thereto, present at the Under-Treasurer's Office, three clear days at the least before the first day of term, a memorial in the printed form, No. 1, which memorial is to be signed and lodged by the Student himself, and the certificate annexed thereto, signed by a practising Barrister of at least ten years' standing.

II.—Every Student, on presenting such memorial, shall produce a certificate of having paid at the Stamp Office the stamp duty of twenty-five pounds sterling, and also pay to the Under-Treasurer the sum of twenty-one pounds ten shillings and four pence, including five pounds five shillings for admission to the King's Inns Library, and five pounds five shillings for lectures under the recent system of legal education—the balance being the ancient fee for admission into the Society as a Student. Students of the Colleges of the Queen's University who shall elect to attend the courses of lectures in those Colleges, as hereafter provided, are exempted from paying the above sum of five guineas for lectures.

III.—Every Student not a graduate of the University of Dublin, Oxford, Cambridge, Durham, London, or the Queen's University in Ireland, shall keep nine Terms' Commons in the Dining Hall of the Society, and also eight Terms' Commons in one of the Four Inns of Court in London, and shall lodge, with the Under-Treasurer, a certificate of having kept said eight Terms' Commons in one of the said Inns of Court in London, on presenting his memorial to be admitted to the degree of Barrister-at-Law.

IV.—Every such Student, if a graduate of any of the said Universities, is only required to keep six Terms' Commons in the Dining Hall of the King's Inns, and also six Terms' Commons in one of the Inns of Court in London.

V.—Every Student admitted into the Society after the first day of Trinity Term, one thousand eight hundred and fifty, if a graduate of the University of Dublin, Oxford, Cambridge, Durham, or London, or the Queen's University in Ireland, shall, as a condition precedent to being called to the Bar, produce certificates of his having attended two complete

Appendix, No. 1.

courses *at least* of lectures—viz., One complete course of lectures of any two, at his option, of the four Law Professors—namely, the Law Professors of the University of Dublin, and those of the King's Inns, and *at least* five-sixths of the lectures of each session or University term; or if a graduate in arts of the Queen's University in Ireland, shall have the option of producing certificates of having attended two complete courses, at least, of lectures of each of the two Law Professors of any College of the Queen's University, comprising not less than thirty-six lectures, and at least five-sixths of the lectures of each course, and of having passed the examinations in the College to which he belongs, on the subjects of the aforesaid two courses of lectures, provided that the curriculum prescribed by the said two courses of lectures shall embrace all that is contained in the course now prescribed by the Professors of the King's Inns, or as the same may be from time to time varied by any rules of the Benchers.

VI.—Every Student admitted into the Society after the above date (if not a graduate of one of the said Universities) shall, as a condition precedent to being called to the Bar, produce certificates of his having attended four courses of lectures—viz., One course of the lectures of each of the said four Professors, and *at least* five-sixths of the lectures of each session or University term, in such manner, however, that every such Student shall be engaged not less than three years in the study of the law in Ireland, exclusive of the two years necessary for keeping terms in England, in every one of which three years, one complete course of lectures must be kept; any Student who shall produce certificates of his having attended during three years the courses of lectures delivered by the Professors of English Law and of Jurisprudence, in one of the Colleges of the Queen's University, and of his having passed the general examinations in such College on the subjects so lectured on, shall be deemed entitled to such and the same privileges, in respect to his being called to the Bar, as if he had actually attended one course of the lectures of each of the two Law Professors of the University of Dublin, and had been engaged for two years in such attendance; but this rule and the preceding one are not intended to affect the number of Terms' Commons required by the present rules of the Society, to be kept by Students of the King's Inns, prior to being called to the Bar.

VII.—If from illness or other sufficient cause any Student should be prevented from completing any course of lectures necessary towards being called to the Bar, the Legal Education Committee have power to direct what further attendance, if any, shall be sufficient in such case.—Rules as to Legal Education, No. 3.

VIII.—Every such Student, having complied with the foregoing Rules, desiring to be admitted to the degree of Barrister-at-Law, and being of the full age of twenty-one years, shall present a memorial in the printed form No. 2, at the Under-Treasurer's Office, three clear days at the least before the first day of term, said memorial to be signed by the Student himself; the certificate annexed thereto to be signed by a practising Barrister of at least ten years' standing, and the declaration at foot thereof by a Bencher.

IX.—Every such Student so applying for admission to the degree of a Barrister-at-Law shall, on presenting his said memorial, pay to the Under-Treasurer the sum of thirty-two pounds eighteen shillings and nine pence, being the ancient fee payable to the Society thereon, and lodge at the same time a certificate of having paid fifty pounds stamp duty at the Stamp Office; also a certificate of having kept the requisite number of terms from one of the Inns of Court in England; and if a graduate of any of the said Universities, shall also lodge a testimonium from such University of having obtained the degree of Bachelor of Arts or Bachelor of Law therein.

APPENDIX, No. 2.

SCHOLARSHIP EXAMINATIONS, 1865.

LITERARY SCHOLARSHIPS OF THE SECOND YEAR.

GREEK.—*Examiner, Professor D'Arcy W. Thompson*, M.A.

Translate :—

LUCIAN.

ΕΡΜΗΣ. Οὐ σχολή μοι, ὦ πορθμεῦ· ἀπέρχομαι γάρ τι διακονησόμενος τῷ ἄνω Διῒ τῶν ἀνθρωπικῶν· ὁ δὲ ὀξύθυμός τέ ἐστι, καὶ δέδια μὴ βραδύναντά με ὅλον ὑμέτερον ἐάσῃ εἶναι, παραδοὺς τῷ ζόφῳ· ἢ, ὅπερ τὸν Ἥφαιστον πρῴην ἐποίησε, ῥίψῃ κᾀμὲ τεταγὼς τοῦ ποδὸς ἀπὸ τοῦ θεσπεσίου βηλοῦ, ὡς ὑποσκάζων γέλωτα παρέχοιμι καὶ αὐτὸς οἰνοχοῶν· ΧΑΡΩΝ. Περιόψει οὖν με ἄλλως πλανώμενον ὑπὲρ γῆς, καὶ ταῦτα ἑταῖρος, καὶ ξύμπλους, καὶ συνδιάκτορος ὤν. καὶ μὴν καλῶς εἶχεν, ὦ παῖ Μαίας, ἐκείνων γοῦν σε μεμνῆσθαι, ὅτι μηδεπώποτέ σε ἢ ἀντλεῖν ἐκέλευσα, ἢ πρόσκωπον εἶναι· ἀλλὰ σὺ μὲν ῥέγκεις ἐπὶ τοῦ καταστρώματος ἐκταθεὶς, ὤμους οὕτω καρτεροὺς ἔχων· ἢ εἴ τινα λάλον νεκρὸν εὕροις, ἐκείνῳ παρ' ὅλον τὸν πλοῦν διαλέγῃ. ἐγὼ δὲ πρεσβύτης ὢν, τὴν δικωπίαν ἕλκων, ἐρέττω μονος. ἀλλὰ πρὸς τοῦ πατρὸς, ὦ φίλτατον Ἑρμίδιον, μὴ καταλίπῃς με· περιήγησαι δὲ τὰ ἐν τῷ βίῳ ἅπαντα, ὥς τι καὶ ἰδὼν ἐπανέλθοιμι· ὡς ἤν με σὺ ἀφῇς, οὐδὲν τῶν τυφλῶν διοίσω· καθάπερ γὰρ ἐκεῖνοι σφάλλονται διολισθαίνοντες ἐν τῷ σκότῳ, οὕτω δὴ κᾀγώ σοι πάλιν ἀμβλυώττω πρὸς τὸ φῶς. ἀλλὰ δὸς, ὦ Κυλλήνιέ, μοι ἐς ἀεὶ μεμνησομένῳ τὴν χάριν.

XENOPHON—*Anabasis*, Book II., chap. vi.

Καὶ γὰρ ὁρᾷν στυγνὸς ἦν καὶ τῇ φωνῇ τραχὺς, ἐκόλαζέ τε ἀεὶ ἰσχυρῶς, καὶ ὀργῇ ἐνίοτε, ὡς καὶ αὐτῷ μεταμέλειν ἔσθ' ὅτε. καὶ γνώμῃ δ' ἐκόλαζεν· ἀκολάστου γὰρ στρατεύματος οὐδὲν ἡγεῖτο ὄφελος εἶναι, ἀλλὰ καὶ λέγειν αὐτὸν ἔφασαν ὡς δέοι τὸν στρατιώτην φοβεῖσθαι μᾶλλον τὸν ἄρχοντα ἢ τοὺς πολεμίους, εἰ μέλλοι ἢ φυλακὰς φυλάξειν ἢ φίλων ἀφέξεσθαι ἢ ἀπροφασίστως ἰέναι πρὸς τοὺς πολεμίους. ἐν μὲν οὖν τοῖς δεινοῖς ἤθελον αὐτοῦ ἀκούειν σφόδρα καὶ οὐκ ἄλλον ᾑροῦντο οἱ στρατιῶται· καὶ γὰρ τὸ στυγνὸν τότε φαιδρὸν αὐτοῦ ἐν τοῖς προσώποις ἔφασαν φαίνεσθαι καὶ τὸ χαλεπὸν ἐῤῥωμένον πρὸς τοὺς πολεμίους ἐδόκει, εἶναι, ὥστε σωτήριον καὶ οὐκέτι χαλεπὸν ἐφαίνετο· ὅτε δ' ἔξω τοῦ δεινοῦ γένοιντο καὶ ἐξείη πρὸς ἄλλους ἄρχοντας ἀπιέναι, πολλοὶ αὐτὸν ἀπέλειπον· τὸ γὰρ ἐπίχαρι οὐκ εἶχεν, ἀλλ' ἀεὶ χαλεπὸς ἦν καὶ ὠμός· ὥστε διέκειντο πρὸς αὐτὸν οἱ στρατιῶται ὥσπερ παῖδες πρὸς διδάσκαλον. καὶ γὰρ οὖν φιλίᾳ μὲν καὶ εὐνοίᾳ ἑπομένους οὐδέποτε εἶχεν· οἵτινες δὲ ἢ ὑπὸ πόλεως τεταγμένοι ἢ ὑπὸ τοῦ δεῖσθαι ἢ ἄλλῃ τινὶ ἀνάγκῃ κατεχόμενοι παρείησαν αὐτῷ, σφόδρα πειθομένοις ἐχρῆτο. ἐπεὶ δὲ ἤρξαντο νικᾷν ξὺν αὐτῷ τοὺς πολεμίους, ἤδη μεγάλα ἦν τὰ χρησίμους ποιοῦντα εἶναι τοὺς ξὺν αὐτῷ στρατιώτας· τό τε γὰρ πρὸς τοὺς πολεμίους θαῤῥαλέως ἔχειν παρῆν καὶ τὸ τὴν παρ' ἐκείνου τιμωρίαν φοβεῖσθαι αὐτοὺς εὐτάκτους ἐποίει. τοιοῦτος μὲν δὴ ἄρχων ἦν· ἄρχεσθαι δὲ ὑπὸ ἄλλων οὐ μάλα ἐθέλειν ἐλέγετο. ἦν δὲ ὅτε ἐτελεύτα ἀμφὶ τὰ πεντήκοντα ἔτη.

Appendix, No. 2.

Scholarship Examinations.

EURIPIDES—*Ion.*

Παῦσαι λόγων τῶνδ', εὐτυχεῖν δ' ἐπίστασο·
θέλω γὰρ οὗπέρ σ' εὗρον ἄρξασθαι, τέκνον,
κοινῆς τραπέζης δαῖτα πρὸς κοινὴν πεσών,
θῦσαί θ' ἅ σου πρὶν γενέθλι' οὐκ ἐθύσαμεν.
καὶ νῦν μὲν ὡς δὴ ξένον ἄγων σ' ἐφέστιον
δείπνοισι τέρψω· τῆς δ' Ἀθηναίων χθονὸς
ἄξω θεατὴν δῆθεν, ὡς οὐκ ὄντ' ἐμόν.
καὶ γὰρ γυναῖκα τὴν ἐμὴν οὐ βούλομαι
λυπεῖν ἄτεκνον οὖσαν αὐτὸς εὐτυχῶν.
χρόνῳ δὲ καιρὸν λαμβάνων προσάξομαι
δάμαρτ' ἐᾷν σε σκῆπτρα τἄμ' ἔχειν χθονός.
Ἴωνα δ' ὀνομάζω σε, τῇ τύχῃ πρέπον,
ὁθούνεκ' ἀδύτων ἐξιόντι μοι θεοῦ
ἴχνος συνῆψας πρῶτος. ἀλλὰ τῶν φίλων
πλήρωμ' ἀθροίσας βουθύτῳ σὺν ἡδονῇ
πρόσειπε, μέλλων Δελφίδ' ἐκλιπεῖν πόλιν.
ὑμῖν δὲ σιγᾶν, δμωΐδες, λέγω τάδε,
ἢ θάνατον εἰπούσαισι πρὸς δάμαρτ' ἐμήν.

HOMER—*Iliad*, Book VI.

Οὐδὲ Πάρις δήθυνεν ἐν ὑψηλοῖσι δόμοισιν,
ἀλλ' ὅγ' ἐπεὶ κατέδυ κλυτὰ τεύχεα, ποικίλα χαλκῷ,
σεύατ' ἔπειτ' ἀνὰ ἄστυ, ποσὶ κραιπνοῖσι πεποιθώς.
ὡς δ' ὅτε τις στατὸς ἵππος, ἀκοστήσας ἐπὶ φάτνῃ,
δεσμὸν ἀπορρήξας θείῃ πεδίοιο κροαίνων
εἰωθὼς λούεσθαι ἐϋρρεῖος ποταμοῖο,
κυδιόων· ὑψοῦ δὲ κάρη ἔχει, ἀμφὶ δὲ χαῖται
ὤμοις ἀΐσσονται· ὁ δ' ἀγλαΐηφι πεποιθώς,
ῥίμφα ἑ γοῦνα φέρει μετά τ' ἤθεα καὶ νομὸν ἵππων·
ὣς υἱὸς Πριάμοιο Πάρις κατὰ Περγάμου ἄκρης,
τεύχεσι παμφαίνων ὥστ' ἠλέκτωρ, ἐβεβήκει
καγχαλόων, ταχέες δὲ πόδες φέρον· αἶψα δ' ἔπειτα
Ἕκτορα δῖον ἔτετμεν ἀδελφεόν, εὖτ' ἄρ' ἔμελλεν
στρέψεσθ' ἐκ χώρης, ὅθι ᾗ ὀάριζε γυναικί.

GREEK COMPOSITION.

Fellow soldiers, it is obvious that Cyrus and ourselves are now quits. We are no longer his soldiers, seeing that we are no longer for marching with him; and he is no longer our paymaster. I am, however, aware that he looks upon himself as having been ill-used at our hands. Consequently, although he is sending for me, I am not disposed to go to him; chiefly from a sense of shame, as I am conscious of having disappointed him; and, furthermore, from the fear of his apprehending me, and visiting on my head the ill-treatment to which he considers himself as having been subjected by me. I consider, then, that it is now no time to go to sleep, or show carelessness, but to deliberate as to what is best to be done under present circumstances. And if we stay here, I

think we should deliberate how we may stay here with the greatest security; and, if we are fully determined on departing, how with the greatest security we may depart, and how we are to get provisions; for without these latter, there is no use in either general or private.

Appendix, No. 2.
Scholarship Examinations.

LATIN.—*Examiner, Professor Bagley,* M.A.

Translate, explaining any allusions that seem to require explanation:—

CICERO—*To Atticus*, Book II., letter xvii.

Prorsus, ut scribis, ita sentio. Turbat Sampsiceramus. Nihil est quod non timendum sit, ὁμολογουμένως τυραννίδα συσκευάζεται. Quid enim ista repentina adfinitatis coniunctio, quid ager Campanus, quid effusio pecuniae significant? Quae si essent extrema, tamen esset nimium mali, sed ea natura rei est, ut haec extrema esse non possint. Quid enim eos haec ipsa per se delectare possunt? Numquam huc venissent, nisi ad res alias pestiferas aditus sibi compararent. Di immortales! Verum, ut scribis, haec in Arpinati a. d. VI. circiter Id. Mai. non deflebimus, ne et opera et oleum philologiae nostrae perierit, sed conferemus tranquillo animo. Neque tam me εὐελπιστία consolatur, ut antea, quam ἀδιαφορία, qua nulla in re tam utor quam in hac civili et publica. Quin etiam, quod est subinane in nobis et non ἀφιλόδοξον—bellum est enim sua vitia nosse—adficitur quadam delectatione. Solebat enim me pungere, ne Sampsicerami merita in patriam ad annos DC. maiora viderentur quam nostra: hac quidem cura certe iam vacuum est. Iacet enim ille sic, ut πτῶσις Curiana stare videatur. Sed haec coram. Tu tamen videris mihi Romae fore ad nostrum adventum: quod sane facile patiar, si tuo commodo fieri possit. Sin, ut scribis, ita venies, velim e Theophane expiscere quonam in me animo sit Arabarches. Quaeres scilicet, ut soles, κατὰ τὸ κηδεμονικὸν et ad me ab eo quasi ὑποθήκας adferes, quem ad modum me geram. Aliquid ex eius sermone poterimus περὶ τῶν ὅλων suspicari.

Pro Milone, ch. xviii.

Videte, iudices, quantae res his testimoniis sint confectae. Primum certe liberatur Milo non eo consilio profectus esse, ut insidiaretur in via Clodio: quippe, si ille obvius ei futurus omnino non erat. Deinde—non enim video cur non meum quoque agam negocium—scitis, iudices, fuisse qui in hac rogatione suadenda dicerent Milonis manu caedem esse factam, consilio vero maioris alicuius. Me videlicet latronem ac sicarium abiecti homines et perditi describebant. Iacent suis testibus ii, qui Clodium negant eo die Romam, nisi de Cyro audisset, fuisse rediturum. Respiravi, liberatus sum: non vereor ne, quod ne suspicari quidem potuerim, videar id cogitasse. Nunc persequar caetera. Nam occurrit illud: Igitur ne Clodius quidem de insidiis cogitavit, quoniam fuit in Albano mansurus. Si quidem exiturus ad caedem e villa non fuisset. Video enim illum, qui dicatur de Cyri morte nunciasse, non id nunciasse, sed Milonem appropinquare. Nam quid de Cyro nunciaret, quem Clodius Roma proficiscens reliquerat morientem? Una fui, testamentum Cyri simul obsignavi cum Clodio: testamentum autem palam fecerat et illum heredem et me scripserat. Quem pridie hora tertia animam efflantem reliquisset, eum mortuum postridie hora decima denique ei nunciabatur?

Appendix, No. 2.

Scholarship Examinations.

Translate into Latin prose :—

Galba was hurried to and fro with every movement of the surging crowd ; the halls and temples all around were thronged with spectators of this dismal sight. Not a voice was heard from the people or even from the rabble. Everywhere were terror-stricken countenances, and ears turned to catch every sound. It was a scene neither of agitation nor of repose, but there reigned the silence of profound alarm and profound indignation. Otho, however, was told they were arming the mob. He ordered his men to hurry on at full speed, and anticipate the danger. Then did these Roman soldiers rush forward like men who had to drive some Vologeses or Pacorus from the ancestral throne of the Arsacidæ, not as though they were hastening to murder their aged and defenceless Emperor. In all the terror of their arms, and at the full speed of their horses, they burst into the Forum, thrusting aside the crowd, and trampling on the senate. Neither the sight of the Capitol, nor the sanctity of the overhanging temples, nor the thought of rulers past or future, could deter them from committing a crime, which any one succeeding to power must avenge.

Translate :—

(A).—LIVY, XXII., 28.

Duplex inde Hannibali gaudium fuit—neque enim quicquam eorum quae apud hostes agerentur, eum fallebat et perfugis multa indicantibus et per suos explorantem :—nam et liberam Minucii temeritatem se suo modo captaturum et sollertiae Fabii dimidium virium decessisse. Tumulus erat inter castra Minucii et Poenorum, quem qui occupasset, haud dubie iniquiorem erat hosti locum facturus. Eum non tam capere sine certamine volebat Hannibal, quamquam id operae pretium erat, quam causam certaminis cum Minucio, quem semper occursurum ad obsistendum satis sciebat, contrahere. Ager omnis medius erat prima specie inutilis insidiatori, quia non modo silvestre quicquam sed ne vepribus quidem vestitum habebat ; re ipsa natus tegendis insidiis eo magis, quod in nuda valle nulla talis fraus timeri poterat. Et erant in amfractibus cavae rupes, ut quaedam earum ducenos armatos possent capere. In has latebras, quot quemque locum apte insidere poterant, quinque milia conduntur peditum equitumque. Necubi tamen aut motus alicuius temere egressi aut fulgor armorum fraudem in valle tam aperta detegeret, missis paucis prima luce ad capiendum quem ante diximus tumulum avertit oculos hostium. Primo statim conspectu contempta paucitas, ac sibi quisque deposcere pellendos inde hostis. Ad locum capiendum dux ipse inter stolidissimos ferocissimosque ad arma vocat, et vanis animis et minis increpat hostem. Principio levem armaturam dimittit ; deinde conferto agmine mittit equites ; postremo, cum hostibus quoque subsidia mitti videret, instructis legionibus procedit. Et Hannibal laborantibus suis alia atque alia ut crescente certamine mittens auxilia peditum equitumque iam iustam expleverat aciem, ac totis utrimque viribus certatur. Prima levis armatura Romanorum, praeoccupatum inferiore loco succedens tumulum, pulsa detrusaque terrorem in succedentem intulit equitem, et ad signa legionum refugit. Peditum acies inter perculsos impavida sola erat, videbaturque, si iusta aut si recta pugna esset, haudquaquam impar futura : tantum animorum fecerat prospere ante paucos dies res gesta. Sed exorti repente insidiatores eum tumultum terroremque in latera utrimque ab tergoque incursantes fecerunt, ut nec animus ad pugnam neque ad fugam spes cuiquam superesset.

(B).—TERENCE—*Adelphi*, Act V., Sc. 1.

Syrus—Demea.

Sy. Edepol, Syrisce, te curasti molliter,
Lauteque munus administrasti tuom.
Abi. Sed postquam intus sum omnium rerum satur,
Prodeambulare huc lubitumst. *De.* Illud sis uide
Exemplum disciplinae. *Sy.* Ecce autem hic adest
Senex noster. Quid fit? Quid tu es tristis? *De.* Oh scelus.
Sy. Ohe iam: tu verba fundis hic, sapientia?
De. Tu si meus esses. *Sy.* Dis quidem esses, Demea,
Ac tuam rem constabilisses. *De.* Exemplo omnibus
Curarem ut esses. *Sy.* Quamobrem? Quid feci? *De.* Rogas?
In ipsa turba atque in peccato maxumo,
Quod uix sedatum satis est, potasti, scelus,
Quasi re bene gesta. *Sy.* Sane nollem huc exitum.

(C).—VIRGIL—*Georgics*, IV., 251–280.

Si vero, quoniam casus apibus quoque nostros
Vita tulit, tristi languebunt corpora morbo,
Quod iam non dubiis poteris cognoscere signis—
Continuo est aegris alius color; horrida vultum
Deformat macies; tum corpora luce carentum
Exportant tectis et tristia funera ducunt;
Aut illae pedibus connexae ad limina pendent,
Aut intus clausis cunctantur in aedibus, omnes
Ignavaeque fame et contracto frigore pigrae:
Tum sonus auditur gravior, tractimque susurrant,
Frigidus ut quondam silvis immurmurat Auster,
Ut mare sollicitum stridit refluentibus undis,
Aestuat ut clausis rapidus fornacibus ignis;—
Hic iam galbaneos suadebo incendere odores,
Melaque arundineis inferre canalibus, ultro
Hortantem et fessas ad pabula nota vocantem.
Proderit et tunsum gallae admiscere saporem
Arentesque rosas, aut igni pinguia multo
Defruta, vel Psythia passos de vite racemos
Cecropiumque thymum et grave olentia centaurea.
Est etiam flos in pratis, cui nomen amello
Fecere agricolae, facilis quaerentibus herba—
Namque uno ingentem tollit de cespite silvam,
Aureus ipse, sed in foliis, quae plurima circum
Funduntur, violae sublucet purpura nigrae;
[Saepe deûm nexis ornatae torquibus arae;]
Asper in ore sapor; tonsis in vallibus illum
Pastores et curva legunt prope flumina Mellae:—
Huius odorato radices incoque Baccho,
Pabulaque in foribus plenis appone canistris.

1. Relate the chief events of the second Punic war, as far as they are contained in the twenty-first and twenty-second books of Livy; and give the dates of its commencement and ending. Give some account also of the author whom he mostly follows in his account of it.

2. Trace the route of Hannibal from the time he left the Ebro until he arrived at the foot of the Alps.

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3. Conjugate the verbs from which the following participles come:—*conferto, perculsos, connexæ, fessas, tunsum, passos, tonsis.*

4. What is there peculiar in the construction of the following sentences of (A)?—

"In has latebras, quot quemque locum apte insidere poterant, quinque milia conduntur peditum equitumque."

"Duplex inde Hannibali gaudium fuit: neque enim quidquam eorum, quae apud hostes agerentur, eum fallebat, et perfugis multa indicantibus et per suos explorantem, nam et liberam Minucii temeritatem se suo modo captaturum, et sollertiae Fabii dimidium virium decessisse."

"Ager omnis medius erat prima specie inutilis insidiatori, quia non modo silvestre quidquam, sed ne vepribus quidem vestitum habebat."

Explain the expressions "justam expleverat aciem," and "si justa aut si recta pugna esset."

5. Explain the derivations of *solertia, dimidium, tumulus, iniquus, amfractus, principium, legio, defrutum.*

ENGLISH.—*Examiner, Professor Moffett,* LL.D.

1. Give a historical sketch of the origin and progress of the science of language, noticing its chief results, as contained in Wiseman's first Lecture.

2. How does Wiseman characterize the genius of Leibnitz?

3. Classify the existing European languages, with their several subdivisions: describe the probable order of their introduction, and their present relative geographical positions.

4. Define the limits of the Anglo-Saxon period: enumerate in chronological order the most eminent writers of the time, ecclesiastical and secular; and mention their principal works both in the vernacular and the Latin tongues.

5. Who are our oldest historians of the Norman Conquest?

6. Enumerate the principal literary works in the vernacular tongue that have come down to us from the interval between the Conquest and Chaucer, with such an account as you can give of any of them.

7. Give an account of the rise and progress of Schools and Universities on the Continent and in England.

8. In what language (or languages) was Magna Charta drawn up? In what language were the earliest Law treatises written? Name them.

9. What are the earliest examples we have of the employment of the English language in the Parliamentary proceedings?

10. Sketch the history of the Early English metrical Romances.

SCIENCE SCHOLARSHIPS OF THE SECOND YEAR.

MATHEMATICS.—*Examiner, Professor Allman,* LL.D.

1. Construct a triangle, being given the base, the difference of the base angles, and the sum or the difference of the sides.

2. Given the ratio of the tangents of two angles; when is the difference of the angles a maximum?

3. Find, in terms of the sides, the area of a quadrilateral which can be inscribed in a circle.

4. At a given point in a given plane erect a perpendicular to the plane.

5. The area of a spherical triangle is proportional to the excess of the sum of its three angles above two right angles.

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6. In a spherical triangle, prove the formulæ—

$$\tan \tfrac{1}{2}(a+b)=\tan \tfrac{1}{2} c \frac{\cos \frac{1}{2}(\mathrm{A}-\mathrm{B})}{\cos \frac{1}{2}(\mathrm{A}+\mathrm{B})};$$

$$\tan \tfrac{1}{2}(a-b)=\tan \tfrac{1}{2} c \frac{\sin \frac{1}{2}(\mathrm{A}-\mathrm{B})}{\sin \frac{1}{2}(\mathrm{A}+\mathrm{B})}.$$

7. Find the equation to rectangular axes of a straight line passing through a given point, and perpendicular to a given straight line.

8. Find the equation to the tangent at the point $x' \, y'$ to a given circle.

9. Given the vertical angle of a triangle and the sum of the reciprocals of the sides, the base will always pass through a fixed point.

10. Find the sum of n terms of the series—

$$a, (a+b)r, (a+2b)r^2, (a+3b)r^3, \ldots .$$

11. The roots of an equation are $a, b, c, \ldots .$ find—

$$(1) \quad \frac{1}{a}+\frac{1}{b}+\frac{1}{c}+ \ldots .$$

$$(2) \quad \frac{a}{b}+\frac{b}{a}+\frac{a}{c}+\frac{c}{a}+ \ldots .$$

12. Every recurring equation of an even number of dimensions may be reduced to an equation of half that number of dimensions. Solve the equation—

$$x^4-5x^3+6x^2-5x+1=0.$$

---

1. If p, q, r be the lengths of the lines drawn from the angles of a triangle bisecting them, and terminated by the opposite sides, prove that

$$\frac{\cos \frac{\mathrm{A}}{2}}{p}+\frac{\cos \frac{\mathrm{B}}{2}}{q}+\frac{\cos \frac{\mathrm{C}}{2}}{r}=\frac{1}{a}+\frac{1}{b}+\frac{1}{c}.$$

2. The surface of a sphere is equal to four times the area of one of its great circles.

3. If θ, ϕ, ψ, denote the distances from the angles A, B, C, respectively, of the points of intersection of arcs bisecting the angles of the spherical triangle ABC, prove that

$$\cos \theta \sin (b-c)+\cos \phi \sin (c-a)+\cos \psi \sin (a-b)=0.$$

4. Given $\tan x=k \tan y$; show that

$$x=y-m \sin 2y+\frac{m^2}{2} \sin 4y-\frac{m^3}{3} \sin 6y \ \ldots \ \text{where } m=\frac{1-k}{1+k}.$$

5. Find the equation of the chord of intersection of two circles. If several circles pass through two fixed points, the chords of intersection with a fixed circle will pass through a fixed point.

6. Find the equation of a circle referred to two tangents as axes of co-ordinates.

7. If $a_1, a_2, a_3, \ldots \ldots a_n$ are the roots of an equation—

$$x^n+p_1x^{n-1}+p_2x^{n-2}+ \ldots \ldots +p_{n-1}x+p_n=0;$$

show that—

$$(1-p_2+p_4- \ldots .)^2+(p_1-p_3+p_5- \ldots .)^2=$$
$$(1+a_1^2)(1+a_2)^2(1+a_3)^2 \ldots \ldots (1+a_n)^2.$$

8. Find in terms of m and a the roots of the equation—

$$x^4+pax^3+(m^2+m)a^2x^2+qa^3x+a^4=0,$$

which are in geometrical progression; and determine p and q in terms of m and a.

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LITERARY SCHOLARSHIPS OF THE FIRST YEAR.

GREEK.—*Examiner, Professor D'Arcy W. Thompson,* M.A.

Translate :—

Iliad, IV., 422–445.

Ὡς δ᾽ ὅτ᾽ ἐν αἰγιαλῷ πολυηχέϊ κῦμα θαλάσσης
ὄρνυτ᾽ ἐπασσύτερον Ζεφύρου ὕπο κινήσαντος·
πόντῳ μὲν τὰ πρῶτα κορύσσεται, αὐτὰρ ἔπειτα
χέρσῳ ῥηγνύμενον μεγάλα βρέμει, ἀμφὶ δέ τ᾽ ἄκρας
κυρτὸν ἐὸν κορυφοῦται, ἀποπτύει δ᾽ ἁλὸς ἄχνην·
ὣς τότ᾽ ἐπασσύτεραι Δαναῶν κίνυντο φάλαγγες
νωλεμέως πόλεμόνδε. κέλευε δὲ οἷσιν ἕκαστος
ἡγεμόνων· οἱ δ᾽ ἄλλοι ἀκὴν ἴσαν—οὐδέ κε φαίης
τόσσον λαὸν ἕπεσθαι ἔχοντ᾽ ἐν στήθεσιν αὐδήν—
σιγῇ δειδιότες σημάντορας· ἀμφὶ δὲ πᾶσιν
τεύχεα ποικίλ᾽ ἔλαμπε, τὰ εἰμένοι ἐστιχόωντο.
Τρῶες δ᾽, ὥστ᾽ ὄϊες πολυπάμονος ἀνδρὸς ἐν αὐλῇ
μυρίαι ἑστήκασιν ἀμελγόμεναι γάλα λευκὸν,
ἀζηχὲς μεμακυῖαι, ἀκούουσαι ὄπα ἀρνῶν,
ὣς Τρώων ἀλαλητὸς ἀνὰ στρατὸν εὐρὺν ὀρώρει·
οὐ γὰρ πάντων ἦεν ὁμὸς θρόος οὐδ᾽ ἴα γῆρυς,
ἀλλὰ γλῶσσ᾽ ἐμέμικτο, πολύκλητοι δ᾽ ἔσαν ἄνδρες.
ὦρσε δὲ τοὺς μὲν Ἄρης, τοὺς δὲ γλαυκῶπις Ἀθήνη
Δεῖμός τ᾽ ἠδὲ Φόβος καὶ Ἔρις, ἄμοτον μεμαυῖα,
Ἄρεος ἀνδροφόνοιο κασιγνήτη ἑτάρη τε,
ἥτ᾽ ὀλίγη μὲν πρῶτα κορύσσεται, αὐτὰρ ἔπειτα
οὐρανῷ ἐστήριξε κάρη καὶ ἐπὶ χθονὶ βαίνει.
ἥ σφιν καὶ τότε νεῖκος ὁμοΐιον ἔμβαλε μέσσῳ
ἐρχομένη καθ᾽ ὅμιλον, ὀφέλλουσα στόνον ἀνδρῶν.

Parse *δειδιότες*, *εἰμένοι*; and give the derivation of *σημάντορας* and *ἄμοτον*.

Translate :—

EURIPIDES—*Ion*, 566–584.

ΧΟΡΟΣ. Κοιναὶ μὲν ἡμῖν δωμάτων εὐπραξίαι·
ὅμως δὲ καὶ δέσποιναν εἰς τέκν᾽ εὐτυχεῖν
ἐβουλόμην ἂν τούς τ᾽ Ἐρεχθέως δόμους.
ΞΟΥΘΟΣ. Ὦ τέκνον, εἰς μὲν σὴν ἀνεύρεσιν θεὸς
ὀρθῶς ἔκρανε, καὶ συνῆψ᾽ ἐμοί τε σέ,
σύ τ᾽ αὖ τὰ φίλταθ᾽ εὗρες οὐκ εἰδὼς πάρος.
ὃ δ᾽ ᾖξας ὀρθῶς, τοῦτο κἄμ᾽ ἔχει πόθος,
ὅπως σύ τ᾽, ὦ παῖ, μητέρ᾽ εὑρήσεις σέθεν,
ἐγώ θ᾽ ὁποίας μοι γυναικὸς ἐξέφυς.
χρόνῳ δὲ δόντες ταῦτ᾽ ἴσως εὕροιμεν ἄν.
ἀλλ᾽ ἐκλιπὼν θεοῦ δάπεδ᾽ ἀλητείαν τε σὴν

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εἰς τὰς 'Αθήνας στεῖχε κοινόφρων πατρί,
οὗ σ' ὄλβιον μὲν σκῆπτρον ἀναμένει πατρός,
πολὺς δὲ πλοῦτος· οὐδὲ θἄτερον νοσῶν
δυοῖν κεκλήσει δυσγενὴς πένης θ' ἅμα,
ἀλλ' εὐγενής τε καὶ πολυκτήμων βίου.
σιγᾷς; τί πρὸς γῆν ὄμμα σὸν βαλὼν ἔχεις,
εἰς φροντίδας δ' ἀπῆλθες, ἐκ δὲ χαρμονῆς
πάλιν μεταστὰς δεῖμα προσβάλλεις πατρί;

EURIPIDES—*Ion*, 1048-1060.

Εἰνοδία θύγατερ Δάματρος, ἃ τῶν
νυκτιπόλων ἐφόδων ἀνάσσεις
καὶ μεθαμερίων, ὅδωσον δυσθανάτων
κρατήρων πληρώματ', ἐφ' οἷσι πέμπει
πότνια πότνι' ἐμὰ χθονίας
Γοργοῦς λαιμοτόμων ἀπὸ σταλαγμῶν
τῷ τῶν 'Ερεχθεϊδᾶν
δόμων ἐφαπτομένῳ·
μηδέ ποτ' ἄλλος ἄλλων ἀπ' οἴκων
πόλεως ἀνάσσοι
πλὴν τῶν εὐγενετᾶν 'Ερεχθειδᾶν.

Parse ᾖξας; derive ἀλητεία; and scan the eleventh line of the iambic passage.

Translate:—

XENOPHON—*Anabasis*.

Εἰ μὲν οὖν ἄλλος τις βέλτιον ὁρᾷ, ἄλλως ἐχέτω· εἰ δὲ μή, Χειρίσοφος μεν ἡγείσθω, ἐπειδὴ καὶ Λακεδαιμόνιός ἐστι· τῶν δὲ πλευρῶν ἑκατέρων δύο τῶν πρεσβυτάτων στρατηγὼ ἐπιμελείσθων· ὀπισθοφυλακῶμεν δ' ἡμεῖς οἱ νεώτατοι ἐγώ τε καὶ Τιμασίων τὸ νῦν εἶναι· τὸ δὲ λοιπόν, πειρώμενοι ταύτης τῆς τάξεως βουλευσόμεθα ὅ τι ἂν ἀεὶ κράτιστον δοκῇ εἶναι. εἰ δέ τις ἄλλο βέλτιον ὁρᾷ, λεξάτω. ἐπεὶ δὲ οὐδεὶς ἀντέλεγεν, εἶπεν· ὅτῳ δοκεῖ ταῦτα, ἀνατεινάτω τὴν χεῖρα. ἔδοξε ταῦτα. νῦν τοίνυν, ἔφη, ἀπιόντας ποιεῖν δεῖ τὰ δεδογμένα· καὶ ὅστις τε ὑμῶν τοὺς οἰκείους ἐπιθυμεῖ ἰδεῖν, μεμνήσθω ἀνὴρ ἀγαθὸς εἶναι· οὐ γάρ ἐστιν ἄλλως τούτου τυχεῖν· ὅστις τε ζῆν ἐπιθυμεῖ, πειράσθω νικᾶν· τῶν μὲν γὰρ νικώντων τὸ κατακαίνειν, τῶν δὲ ἡττωμένων τὸ ἀποθνήσκειν ἐστί· καὶ εἴ τις δὲ χρημάτων ἐπιθυμεῖ, κρατεῖν πειράσθω· τῶν γὰρ νικώντων ἐστὶ καὶ τὰ ἑαυτῶν σώζειν καὶ τὰ τῶν ἡττωμένων λαμβάνειν.

LUCIAN—*Charon*.

Καὶ μὴν οὐδ' εἰπεῖν ἔχοις ἂν κατὰ τὴν ἀξίαν, ὅπως ἐστὶ καταγέλαστα, ὦ Χάρων· καὶ μάλιστα αἱ ἄγαν σπουδαὶ αὐτῶν, καὶ τὸ μεταξὺ τῶν ἐλπίδων οἴχεσθαι, αναρπάστους γιγνομένους ὑπὸ τοῦ βελτίστου θανάτου. ἄγγελοι δὲ αὐτοῦ, καὶ ὑπηρέται μάλα πολλοί, ὡς ὁρᾷς, ἠπίαλοι, καὶ πυρετοί, καὶ φθόαι, καὶ περιπνευμονίαι, καὶ ξίφη, καὶ ληστήρια, καὶ κώνεια, καὶ δικασταί, καὶ τύραννοι· καὶ τούτων οὐδὲν ὅλως αὐτοὺς εἰσέρχεται, ἔστ' ἂν εὖ πράττωσιν·

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ὅταν δὲ σφαλῶσι, πολὺ τὸ ὀττοτοῖ, καὶ αἲ αἴ, καὶ ὤ μοι μοι. εἰ δ᾽ εὐθὺς ἐξ ἀρχῆς ἐνενόουν, ὅτι θνητοί τέ εἰσιν αὐτοὶ, καὶ ὀλίγον τοῦτον χρόνον ἐπιδημήσαντες τῷ βίῳ ἀπίασιν, ὥσπερ ἐξ ὀνείρατος, πάντα ὑπὲρ γῆς ἀφέντες, ἔζων τε ἂν σωφρονέστερον, καὶ ἧττον ἠνιῶντο ἀποθανόντες. νῦν δὲ ἐς ἀεὶ ἐλπίσαντες χρῆσθαι τοῖς παροῦσιν, ἐπειδὰν ἐπιστὰς ὁ ὑπηρέτης καλῇ, καὶ ἀπάγῃ, πεδήσας τῷ πυρετῷ ἢ τῇ φθόῃ, ἀγανακτοῦσι πρὸς τὴν ἀγωγὴν, οὔ ποτε προσδοκήσαντες ἀποσπασθήσεσθαι αὐτῶν. ἢ τί γὰρ οὐκ ἂν ποιήσειεν ἐκεῖνος ὁ τὴν οἰκίαν σπουδῇ οἰκοδομούμενος, καὶ τοὺς ἐργάτας ἐπισπέρχων, εἰ μάθοι, ὅτι ἡ μὲν ἕξει τέλος αὐτῷ· ὁ δὲ, ἄρτι ἐπιθεὶς τὸν ὄροφον, ἀπίοι, τῷ κληρονόμῳ καταλιπὼν ἀπολαύειν αὐτῆς, αὐτὸς μηδὲ δειπνήσας ἄθλιος ἐν αὐτῇ;

Parse ἀπίασιν, ἀποσπασθήσεσθαι, ἠνιῶντο.

GREEK COMPOSITION.

1. I said that in the presence of your father.
2. I should not like to say so in the presence of your father.
3. I should not have said that, had you been present at the time.
4. Would you be disposed to do that, if you were all the time aware that the man had spoken so ill of you?
5. "Did he really say so?" "He did, indeed." "Then, believe me, my good sir, if he said it, he meant it."
6. Fellow-soldiers, hear what I take to be requisite. It is obvious that we must march to where we are to get provisions. Now I am informed that there are some fine villages not more than twenty stadia distant. Now; as curs run after men that pass them by; and bite them, if they can; but run away from those that run after them; so, I should not be surprised if in just such a way these fellows should be for following us.

LATIN.—*Examiner, Professor Bagley,* M.A.

Translate :—

(A).—VIRGIL—*Æneid,* VI., 295–316.

Hinc via, Tartarei quae fert Acherontis ad undas.
Turbidus hic coeno vastaque voragine gurges
Aestuat atque omnem Cocyto eructat arenam.
Portitor has horrendus aquas et flumina servat
Terribili squalore Charon, cui plurima mento
Canities inculta iacet, stant lumina flamma,
Sordidus ex humeris nodo dependet amictus;
Ipse ratem conto subigit velisque ministrat,
Et ferruginea subvectat corpora cymba,
Iam senior, sed cruda deo viridisque senectus.
Huc omnis turba ad ripas effusa ruebat.
Matres atque viri, defunctaque corpora vita
Magnanimûm heroum, pueri innuptaeque puellae,
Impositique rogis iuvenes ante ora parentum:
Quam multa in silvis auctumni frigore primo
Lapsa cadunt folia, aut ad terram gurgite ab alto
Quam multae glomerantur aves, ubi frigidus annus
Trans pontum fugat et terris immittit apricis.
Stabant orantes primi transmittere cursum,
Tendebantque manus ripae ulterioris amore;
Navita sed tristis nunc hos, nunc accipit illos,
Ast alios longe submotos arcet arena.

(B).—Horace—*Odes*, Book I., xxxiii.

Albi, ne doleas plus nimio memor
Immitis Glycerae, neu miserabiles
Decantes elegos, cur tibi iunior
  Laesa praeniteat fide.

Insignem tenui fronte Lycorida
Cyri torret amor, Cyrus in asperam
Declinat Pholoën; sed prius Appulis
  Iungentur capreae lupis,

Quam turpi Pholoë peccet adultero.
Sic visum Veneri, cui placet impares
Formas atque animos sub iuga ahenea
  Saevo mittere cum ioco.

Ipsum me, melior cum peteret Venus,
Grata detinuit compede Myrtale
Libertina, fretis acrior Hadriae
  Curvantis Calabros sinus.

(C).—Horace—*Epistles*, Book II., Ep. i., 232 *ad fin.*

Gratus Alexandro regi Magno fuit ille
Choerilus, incultis qui versibus et male natis
Retulit acceptos, regale nomisma, Philippos.
Sed veluti tractata notam labemque remittunt
Atramenta, fere scriptores carmine foedo
Splendida facta linunt. Idem rex ille, poëma
Qui tam ridiculum tam care prodigus emit,
Edicto vetuit, ne quis se praeter Apellem
Pingeret, aut alius Lysippo duceret aera
Fortis Alexandri vultum simulantia. Quodsi
Iudicium subtile videndis artibus illud
Ad libros et ad haec Musarum dona vocares:
Boeotum in crasso iurares aëre natum.
At neque dedecorant tua de se iudicia atque
Munera, quae multa dantis cum laude tulerunt
Dilecti tibi Virgilius Variusque poëtae,
Nec magis expressi vultus per ahenea signa,
Quam per vatis opus mores animique virorum
Clarorum apparent. Nec sermones ego mallem
Repentes per humum, quam res componere gestas,
Terrarumque situs et flumina dicere et arces
Montibus impositas et barbara regna, tuisque
Auspiciis totum confecta duella per orbem,
Claustraque custodem pacis cohibentia Ianum,
Et formidatam Parthis te principe Romam,
Si quantum cuperem, possem quoque; sed neque parvum
Carmen maiestas recipit tua, nec meus audet
Rem tentare pudor, quam vires ferre recusent.
Sedulitas autem, stulte quem diligit, urget,
Praecipue cum se numeris commendat et arte:
Discit enim citius meminitque libentius illud,
Quod quis deridet, quam quod probat et veneratur.
Nil moror officium, quod me gravat, ac neque ficto
In peius vultu proponi cereus usquam
Nec prave factis decorari versibus opto,

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Ne rubeam pingui donatus munere, et una
Cum scriptore meo capsa porrectus aperta
Deferar in vicum vendentem thus et odores
Et piper et quidquid chartis amicitur ineptis. 270

1. Explain the syntax of the following words:—In (A), *Cocyto*, v. 297; *velis*, v. 302; *vita*, v. 306; in (C), *versibus*, v. 233, and *Lysippo*, v. 240. Explain also the use of *cur* in (B), v. 3; and quote another passage from Horace in which it is similarly used.

2. What are the two explanations given of the expression "multa dantis cum laude" in (C)? What is the usual meaning of the word *portitor*, and how do you connect it etymologically with the meaning which the word has in (A)?

3. Decline the nouns *gurges*, *canities*, *heros*, *adulter*, *compes*, *princeps*; and conjugate the verbs *lino*, *veto*, *pingo*, *audeo*, *amicio*, *subigo*, *tendo*, *torreo*.

4. Give the derivations of the following words, explaining the connexion between the root and the ordinary meaning wherever you think it requisite:—*Vorago*, *arena*, *nomisma*, *subtilis*, *bellum*, *sedulus*, *ineptus*, *officium*, *adulter*, *biceps*, *princeps*, *auctumnus*.

Translate:—

LIVY, III., xxii.

Consules creati Q. Fabius Vibulanus tertium et L. Cornelius Maluginensis. Census actus eo anno. Lustrum propter Capitolium captum, consulem occisum, condi religiosum fuit. Quinto Fabio L. Cornelio consulibus principio anni statim res turbulentae. Instigabant plebem tribuni. Bellum ingens a Volscis et Aequis Latini atque Hernici nuntiabant: iam Antii Volscorum legiones esse. Et ipsam coloniam ingens metus erat defecturam; aegreque impetratum a tribunis, ut bellum praeverti sinerent. Consules inde partiti provincias: Fabio, ut legiones Antium duceret, datum, Cornelius ut Romae praesidio esset, ne qua pars hostium, qui Aequis mos erat, ad populandum veniret. Hernici et Latini iussi milites dare ex foedere; duaeque partes sociorum in exercitu, tertia civium fuit. Postquam ad diem praestitutum venerunt socii, consul extra portam Capenam castra locat. Inde lustrato exercitu Antium profectus haud procul oppido stativisque hostium consedit. Ubi cum Volsci, quia nondum ab Aequis venisset exercitus, dimicare non ausi, quem ad modum quieti vallo se tutarentur, pararent, postero die Fabius non permixtam unam sociorum civiumque sed trium populorum tres separatim acies circa vallum hostium instruxit. Ipse erat medius cum legionibus Romanis. Inde signum observare iussit, ut pariter et socii rem inciperent referrentque pedem, si receptui cecinisset. Equites item suae cuique parti post principia collocat. Ita trifariam adortus castra circumvenit, et cum undique instaret, non sustinentes impetum Volscos vallo deturbat. Transgressus inde munitiones pavidam turbam inclinatamque in partem unam castris expellit. Inde effuse fugientes eques, cui superare vallum haud facile fuerat, cum ad id spectator pugnae adstitisset, libero campo adeptus parte victoriae fruitur territos caedendo. Magna et in castris et extra munimenta caedis fugientium fuit, sed praeda maior, quia vix arma secum efferre hostis potuit. Deletusque exercitus foret, ni fugientis silvae texissent.

SALLUST—*Jugurtha*, xliv.

Sed ubi in Africam venit, exercitus ei traditur a Sp. Albino Proconsule iners, imbellis, neque periculi neque laboris patiens, lingua quam manu promptior, praedator ex sociis et ipse praeda hostium, sine imperio et

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modestia habitus. Ita imperatori novo plus ex malis moribus sollicitudinis, quam ex copia militum auxilii aut bonae spei accedebat. Statuit tamen Metellus, quamquam et aestivorum tempus comitiorum mora imminuerat, et exspectatione eventus civium animos intentos putabat, non prius bellum attingere quam maiorum disciplina milites laborare coegisset. Nam Albinus, Auli fratris exercitusque clade perculsus postquam decreverat non egredi provincia, quantum temporis aestivorum in imperio fuit plerumque milites stativis castris habebat, nisi quum odos aut pabuli egestas locum mutare subegerat. Sed neque more militari vigiliae deducebantur, uti cuique lubebat ab signis aberat. Lixae permixti cum militibus die noctuque vagabantur, et palantes agros vastare, villas expugnare, pecoris et mancipiorum praedas certantes agere, eaque mutare cum mercatoribus vino advectitio et aliis talibus; praeterea frumentum publice datum vendere, panem in dies mercari, postremo, quaecumque dici aut fingi queunt ignaviae luxuriaeque probra, in illo exercitu cuncta fuere et alia amplius.

1. At what intervals was the census taken at Rome, and what were the ceremonies observed on its completion? Derive the word *lustrum*, and state the different meanings in which it is used.

2. On what occasion was the office of tribunes of the plebs instituted, and for what purpose? What is meant by the right of intercessio, and how did the tribunes abuse it in the later times of the republic?

3. Give the derivations of the words *oppidum*, *acies*, *comitium* (distinguishing the meanings of the singular and plural), *provincia*, *mancipium*, *cunctus*.

Re-translate into Latin prose:—

This battle being ended, and the nation and name of the Nervii being almost reduced to annihilation, their old men, whom, together with the boys and women, we have stated to have been collected together in the fenny places and marshes, on this battle having been reported to them, since they were convinced that nothing was an obstacle to the conquerors, and nothing safe to the conquered, sent ambassadors to Cæsar by the consent of all who remained, and surrendered themselves to him; and in recounting the calamity of their state, said that their senators were reduced from six hundred to three; that from sixty thousand men they were reduced to scarcely five hundred who could bear arms; whom Cæsar, that he might appear to use compassion towards the wretched and the suppliant, most carefully spared, and ordered them to enjoy their own territories and towns, and commanded their neighbours to restrain themselves and their dependants from offering them injury or outrage.

OUTLINES OF GRECIAN AND ROMAN HISTORY, AND OF ANCIENT AND MODERN GEOGRAPHY.—*Examiner, Professor Moffett,* LL.D.

1. Write a brief sketch of the career and character—(*a.*) of Xenophon; (*b.*) of Cicero, adding dates.

2. Sketch (in words, or lines, or both) the ancient subdivisions of the Peloponnesus.

3. Give a sketch of the early history of Athens, down to the time of Pisistratus.

4. Relate the circumstances which led to the Peloponnesian War; and give the dates of its commencement and close.

5. Mention the principal Cities, Rivers, and Mountains of ancient Italy, with their modern names.

6. Where was Magna Græcia, and why was it so called?

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7. Give the threefold division of Hispania.

8. Give the ancient names of the Danube, the Rhine, the Rhone, the Sea of Azoff; and of the Morea, Negropont, Gibraltar, Malta, Paris, York, Cologne.

9. Fix the localities of Marathon, Salamis, Thermopylae, the Metaurus, the Rubicon, and Pharsalia; and date the actions or events on which their fame rests.

10. Give the dates of the following events:—The three Punic Wars; the closings of the Temple of Janus; the invasions of Italy by Brennus, by Hannibal, and by Pyrrhus; the fall of Corinth; the assassination of Julius Cæsar.

11. Name and describe the geographical positions of the birthplaces of Euripides, Lucian, Horace, Virgil, Sallust, and Livy.

12. Give the geographical positions of the following places: name the States to which they respectively belong; and notice any circumstances of interest connected with some or all of them:—

Damascus, Vera Cruz, Long Island, Cracow, Denia, Trebisond, Angola, Tübingen, Samarcand, Dendermonde, Candahar, Leipsic, Angora, Upsal.

SCIENCE SCHOLARSHIP OF THE FIRST YEAR.

ARITHMETIC.—*Professor Allman*, LL.D.

1. Explain the method of reducing a fraction to its lowest terms.

Examples— $\frac{272}{425}$; $\frac{835}{1472}$.

2. State the rules for the conversion of circulating decimals into equivalent vulgar fractions.

Examples— $\cdot\dot{1}4285\dot{7}$; $\cdot 342\dot{7}5\dot{3}$.

3. Find the third power of $\cdot\dot{7}$.

4. A banker borrows money at 3½ per cent., and pays the interest at the end of the year; he lends it out at 5 per cent., but receives the interest half-yearly, and by this means gains £200 a year; how much does he borrow?

5. A merchant employs £700 in trade, and at the end of 3 years takes another into partnership, who advances £1,900. At the end of 4 years from this time they have gained £500; how ought this to be divided between them?

6. Extract the square roots of 44533·6609, and of ·0633679929.

7. A and B can do a piece of work alone in 12 and 16 days respectively; they work together at it for 3 days, when A leaves it, but B continues, and after 2 days is joined by C, and they finish it together in 3 days; in what time would C do it alone?

8. Find the value of $1+\frac{1}{1}+\frac{1}{1\times 2}+\frac{1}{1\times 2\times 3}+$, &c., to 7 places of decimals.

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1. Divide $(ax^2+bxy+cy^2)\ (a'x'^2+b'x'y'+c'y'^2)-(a'x^2+b'xy+c'y^2)$ $(ax'^2+bx'y'+cy'^2)$ by $xy'-yx'$; and simplify

$$\frac{\frac{1}{a}+\frac{1}{b+c}}{\frac{1}{a}-\frac{1}{b+c}}\left\{1+\frac{b^2+c^2-a^2}{2bc}\right\}$$

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2. Find the greatest common measure of $a^3x^3-a^2bx^2y+ab^2xy^2-b^3y^3$, and $2a^2bx^2y-ab^2xy^2-b^3y^3$.

3. Solve the following equations :—

$$\sqrt{x+15}-\sqrt{x+8}=\sqrt{x}\,;\quad (x-1)\,(x-2)\,(x-3)=1.2.3.$$

4. Solve the simultaneous equations :—

$$xy=c(x+y),\ yz=a(y+z),\ zx=b(z+x).$$

5. Two travellers, A and B, set out at the same time from two places, P and Q, respectively, and travel so as to meet. When they meet it is found that A has travelled 30 miles more than B; that A will reach Q in 4 days, and that B will reach P in 9 days, after they meet; find the distance between P and Q.

6. If a straight line be drawn from the vertex of an isosceles triangle to the base or the base produced, the difference between its square and the square of a side of the triangle is equal to the rectangle under the segments of the base.

7. The sum of one pair of opposite sides of a quadrilateral circumscribing a circle is equal to the sum of the other pair, and the straight line which joins the middle points of the diagonals of the quadrilateral passes through the centre of the circumscribing circle.

8. Construct a rectilinear figure equal to a given one, and similar to another given one.

9. Prove that the sum of the radii of the three escribed circles of a triangle exceeds the radius of the inscribed circle by four times the radius of the circumscribed circle of the triangle.

10. If perpendiculars be drawn from any point on the circumference of a circle to two tangents and their chord of contact, the square on the perpendicular to the chord is equal to the rectangle under the other two perpendiculars.

11. Find the area of a triangle in terms of the sides.

12. Find sin A and sin B from the equations :

$$a\sin 2\mathrm{A}-b\sin 2\mathrm{B}=0,\ a\sin \mathrm{B}-b\sin \mathrm{A}=0.$$

13. The cotangents of the half angles of a triangle are three successive integers. Prove that the triangle is right-angled, and find the ratio of the sides.

14. Simplify the following expressions :—

$$\frac{\sin(\mathrm{A}+\mathrm{B})+\sin(\mathrm{A}-\mathrm{B})}{\cos(\mathrm{A}+\mathrm{B})-\cos(\mathrm{A}-\mathrm{B})}\,;$$

$$\cos^2(\mathrm{A}+\mathrm{B})+\cos^2(\mathrm{A}-\mathrm{B})-\cos 2\mathrm{A}\cos 2\mathrm{B}.$$

ENGINEERING SCHOLARSHIPS OF THE THIRD YEAR.

MIXED MATHEMATICS.—*Examiner*, *Professor Curtis*, LL.D.

1. Determine the limiting positions of equilibrium of a heterogeneous beam placed entirely within a rough hollow sphere.

2. Determine the position of equilibrium of a rough sphere placed between two inclined planes.

3. A homogeneous bar rests within a smooth ellipse, whose axis is vertical; prove that, in order that there should be equilibrium, the bar must pass through the lower focus, or be horizontal.

4. A body is projected horizontally with a velocity of 60 feet per second, and is acted on by gravity; find the co-ordinates of its position after the lapse of 3 seconds.

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5. A body is projected vertically upwards; show that at any point of its course in descending it will have the same velocity as it had at the same point in ascending.

6. A sphere of wood, whose specific gravity is s, floats in a liquid, whose specific gravity is l; if its radius be r, show that x, the depth to which it will sink, is given by the equation $x^3 - 3rx^2 + 4r^3 \frac{s}{l} = 0$.

7. Find to what height water will rise in a common suction pump at the second stroke of the piston.

8. Determine the dispersion produced by a thin prism.

9. Determine the magnifying power of a given convex lens with regard to an eye, whose distance of distinct vision is given.

10. How does the obliquity of the ecliptic account for the different length of the day at different places, and various seasons?

Experimental Physics.

1. Describe the hydraulic ram.

2. By what means has been determined the rate of vibration of a gnat's wing?

3. In what two ways may crystallization be produced?

4. When, in consequence of the presence of salts, the boiling point of water is raised, what law does the temperature of the vapour follow?

5. How is the latent heat of vapour determined?

6. Account for the phenomenon known as "Newton's Rings."

7. How may the intensity of the earth's magnetic force at different times be compared?

8. Describe Harris's "unit jar."

9. Describe Faraday's experiment for proving that the charge in a Leyden jar resides on the *glass*. Is the experiment perfectly conclusive?

10. Describe the various galvanic batteries, stating the advantages, or defects, of each.

Medical Scholarship of the Fourth Year.

Medical Jurisprudence.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. Gases are of two classes, as regards their mode of action in destroying life; give an example of each and the grounds for the distinction.

2. A dead body, with one or two wounds, is found. What would enable you to give an opinion as to their being inflicted before or after death, and the probable time elapsed since they were received?

3. What antidotes would be proper against the poisonous action of oxalic acid?

4. What indications, chemical and sensional, would satisfy you of action of aconitia or its salts, or its presence in the body after death?

5. Is the presence of phlyctinæ positive proof that death was caused by burning?

Materia Medica.

1. In what cases, and on what theory is the phosphate of ammonia prescribed. Any fault in the theory? Dose?

2. State the difference in the action of the jalapæ resina, Br. Phar., of an extract or infusion of the root of the drug previously deprived of its resin, and of the simple powder of the root?

3. What are the disordered actions of Cinchona or its alkaloid (quinia) which are grouped under the term "Quininism"?

4. How would you ascertain the strength of a specimen of the officinal prussic acid, if means were not at hand to obtain its specific gravity accurately?

5. What are the symptoms displayed in what is called narcotism?

Practice of Medicine.—*Examiner, Professor Colahan,* M.D.

1. Give the symptoms of disordered action of the brain and nervous system indicative of arsenic poisoning, and as distinguished from those of ordinary apoplectic forms of disease.

2. Describe the symptoms of acute softening of the brain, and the symptoms which distinguish it from cerebral hemorrhage.

3. State fully the symptoms of simple acute menengitis, and give the essential diagnosis between this form of disease and acute tubercular menengitis.

4. Describe the essential elements of delirium as characteristic—first, of idiopathic disease of brain; second, of blood poisoning, as in typhus, scarlatina, &c.; third, of delirium e potæ.

5. Give the generic symptoms which would enable you to diagnose between cephalalgia of brain origin, and the several forms of pain of head, induced by acute specific diseases, and the sympathetic headache of distant organs.

Medical Scholarships of the Second and Third Years.

Materia Medica.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. Diaphoretics are in practice divisible into two classes; give the practical difference, and an example of each class.

2. What is the practical difference between tannic and gallic acids as medical astringents? What other medicines of the same class are incompatible with tannic acid in prescription?

3. What are the active constituents of the pilula gambogiæ comp. and on what principle is it useful to have them combined?

4. In what form is the sodæ arsenias exhibited internally? What preparation is there in the British Pharmacopœia of this form? What advantage is it said to have over the arsenicalis liquor? Its dose?

5. Enumerate the officinal salts of mercury, distinguishing the insoluble, the partially soluble, and the perfectly soluble in water.

Prescriptions.

Direct twelve pills with strychnia their active ingredients, with full directions how they are to be made, each pill being a safe dose.

Direct an anodyne to be administered by the rectum, in irritable or painful conditions of the bladder, prostate, or urethra.

Order twelve leeches to be applied to the temples.

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MEDICAL SCHOLARSHIPS OF THE SECOND YEAR.

NATURAL HISTORY.—*Examiner, Professor Melville, M.D.*

ZOOLOGY.

1. Give a sketch of the vertebrate structure of the skull.
2. State the characteristics of the *Edentata*, and mention some of the fossil species of the group.
3. Classify the *Ungulata*, and state the characters of the groups adopted.
4. Give a description of the stomach in Ruminants.

BOTANY.

1. Describe the structure of the ovule, and mention its principal forms.
2. Describe the structure of the wood-bundle in *Dicotyledones*.
3. State the characters of the natural orders :—*Rosaceæ, Orchidaceæ.*
4. Describe the function of nutrition in plants.

EXPERIMENTAL PHYSICS.—*Examiner, Professor Curtis, LL.D.*

1. Distinguish between ductility and malleability. Mention the most ductile, also the most malleable metal.
2. By what experiment is the principle of Archimedes verified?
3. What corrections must be applied to the observed reading of a mercurial barometer to determine the accurate atmospheric pressure?
4. Describe Hero's fountain.
5. How did Major Wilkinson exhibit the expansive force of ice?
6. Enumerate the various kinds of lenses.
7. Describe the mode of charging and discharging a Leyden jar.
8. What is meant by the "magnetic dip"?
9. State the advantages of Grove's battery.
10. The arms of a lever are 2 feet and 5 feet, the power is 6 lbs.; what is the weight according as the lever is of the first, second, or third kinds?

LAW SCHOLARSHIPS OF THE FIRST YEAR.

JURISPRUDENCE.—*Examiner, Professor Cairnes, M.A.*

1. Describe the general character and results of the change in the Roman constitution attributed to Servius Tullius.
2. The Decemviral legislation forms an epoch in Roman jurisprudence: in what consisted its special importance?
3. Describe the principal steps by which the *plebs* attained to full equality with the patricians.
4. Explain the origin of the *jus gentium*, and its relation to the *jus civile* and *jus naturale*.
5. What was the origin of the "Prætorian Law" of Rome? What is its analogue in the English system?
6. What was the point at issue between the "Proculians" and "Sabinians"?
7. What were the constitutive elements of *status?*
8. State the different kinds of Roman marriage; and point out the legal effect of each on the position of the wife.

9. Distinguish between rights *in rem* and rights *in personam.*

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10. Explain the meaning of "fiction," "equity," and "legislation," as these words are employed by Mr. Maine; and show how each operates in the development of law.

11. Explain the origin and nature of the "*responsa prudentum.*" To what did they correspond in the English legal system? The analogy, however, fails in an important point?

12. What was the principle of union in primitive society, as contradistinguished from that which holds society together in modern times?

13. The distinction referred to in the last question led to certain characteristic distinctions between the legal systems of early and of later ages?

14. Can you explain the more extended use of "adoption" in ancient as compared with modern times?

15. Certain extant social phenomena bear witness to the widespread prevalence in former ages of the *patria potestas?*

16. Define the following terms :—

"Command."
"Law."
"Sanction."
"Duty."
"Positive Law."

17. Bentham reduces all speculation in jurisprudence under three principles?

18. Describe the process of Bentham's "moral arithmetic."

19. There are two reasons why legislation should not be co-extensive with law?

20. What did Bentham mean by "passionate" and "neutral" terms?

SENIOR SCHOLARSHIP IN LAW.

JURISPRUDENCE.—*Examiner, Professor Cairnes,* M.A.

1. What did Bentham mean by the "real" and "apparent" value of a punishment? Which produced all the evil, and which all the good, incident to a penal code?

2. Why does Bentham not include "liberty" amongst the objects of law?

3. On what grounds does Bentham justify the testamentary right?

4. What are the limits to the right of self-defence?

5. State accurately the nature of "frank pledge."

6. What was the meaning and origin of the privilege known as "benefit of clergy"? By what limitations was it restrained in later times, and when was it abolished?

7. What are the conditions (positive and negative) necessary to constitute "an independent political society"?

8. How does Austin justify the expression "positive morality" as applied to international law?

9. "The true nature and fountain of positive law," Austin remarks, "is often absurdly mistaken :" give some examples of the mistakes here referred to, and state Austin's explanation of their origin.

10. In what category of political constitutions does Austin place "limited monarchy"?

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11. Describe the several forms of Roman testament, pointing out in what respect each differed from a modern will. To which of these forms is the modern will to be traced?

12. The principle of the distinction between *res mancipi* and *res nec mancipi* may be traced in other systems of law than the Roman?

13. What was *emphyteusis?* Trace its influence upon the feudal form of ownership.

14. What was the position of married women under the later Roman law?

15. What are the elements of an act necessary to constitute it a crime?

16. What is the basis of truth in the popular notion that certain classes of persons (infants, married women, and lunatics,) cannot commit crime?

17. What, in the early period of English law, was the character of a "misdemeanor" as contradistinguished from a felony? How do these two species of offences now stand related?

18. Distinguish "inquisitorial" from "litigious" procedure, and show the advantages and disadvantages of each plan.

19. State the legal position of the father with reference to the property of his children, as it stood in the time of Julius Cæsar, and the same, as it existed in the time of Justinian.

Senior Scholarship in Metaphysics and Political Economy.

Political Economy.—*Examiner, Professor Cairnes*, M.A.

1. Mill states that "increased dearness of food, the result of increased cost, tends to diminish the quantity of other things rather than of food:" explain how.

2. Imported commodities are higher in price in the importing than in the producing country on an average exactly by the amount of cost of carriage; nevertheless, it does not follow that the importing country pays the cost of carriage?

3. It appears that the average value of imports into England is largely in excess of exports from England: how do you reconcile this phenomenon with the maintenance of an average par of exchange?

4. Describe the practical operation of the Bank Act under each of the following conditions of commerce:—

1. The quiescent state.
2. The ascending period of speculation.
3. The period of falling prices.
4. The period of collapse and panic.

5. Distinguish between wages in the following senses:—"Money wages," "real wages," "proportional wages."

- α. Give an example of a high rate of "real wages" coinciding with a low rate of "proportional wages."
- β. In which sense is "wages" of importance to the labourer; and in which to the capitalist?

6. A protective tax, to whatever description of commodity it is applied, is an eminently wasteful mode of raising revenue; but when applied to the produce of land, it is liable to a special objection over and above that which is applicable to it in other cases. State the general and the special objection.

7. Two theories have been propounded to account for "gluts," each of which suggests a distinct and appropriate practical remedy?

8. What are the principal elements of fixed and of circulating capital?

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9. The extended use of machinery is frequently defended as favourable to the interests of the labouring classes by an unsound argument: what is it? State the true justification.

10. What do you mean by "equality of profits," as assumed in economic reasoning?

11. A rise or fall of general profits is in all cases traceable ultimately to one or more of three causes?

12. To what cause mainly do the precious metals owe their stability of value? In which of them is this condition most fully realized?

13. Explain what is meant by "the fixity of the price of gold."

14. What are Adam Smith's four maxims of taxation?

15. How far does Mill admit that any class should remain untaxed?

SENIOR SCHOLARSHIP IN NATURAL PHILOSOPHY.

NATURAL PHILOSOPHY.—*Examiner, Professor Curtis,* LL.D.

1. A beam rests against two rough cylindrical pegs, passing under one and over the other, being moreover at right angles to the axis of each of the pegs; prove that when the beam is on the point of slipping, x, the distance of its centre of gravity from the axis of similitude of the cylinders is given by the equation—

$$x=\frac{\sqrt{d^2-(r+r')^2}}{\lambda+\lambda'}\left(\tan\theta+\frac{\lambda' r-\lambda r'}{r+r'}\right)$$

where r, r' are the radii of the principal sections of the two cylinders, d the distance between their axis, λ, λ' their coefficients of friction, and θ the inclination of the beam to the horizon.

2. A heavy heterogeneous plane triangle is supported by three vertical strings, each fastened to one of its sides; given the ratios of the three tensions, show that the points of attachment of the strings are arbitrary, but that, one of them being given, the other two can be determined.

3. A body is restricted to a smooth rectilinear groove, and is acted on by a central attractive force towards a point outside the groove, varying directly as distance, and by a force of resistance varying as velocity; determine its motion.

4. A body describes a cardioid under the action of a force constantly directed towards its cusp; find the law of force.

5. A circular area is just immersed in a liquid; determine its centre of pressure.

6. Find the nature of the surface which will refract rays accurately from one given point to another.

7. If t be the angle of elongation of a planet from the sun, as seen from the earth, when it appears stationary, show that t is determined by the equation $\sin^2 t=\frac{r'^2}{r^2+rr'+r'^2}$, r, r' being the radii of the earth's and planet's orbits, supposed circular.

8. Describe the various methods for estimating the linear dilatation of solids by heat. How may the coefficient of cubical dilatation be deduced from the coefficient of linear dilatation?

9. When a string is set vibrating, another string near it will commence to vibrate, if tuned to the same note as the former; why?

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Scholarship Examinations.

10. Describe the principal methods of estimating the changes in the earth's magnetic intensity?

11. Describe the various kinds of galvanometers, and the mode of using each.

12. Establish the law of equilibrium of the balance of torsion, and state the principal applications which have been made of this balance in physical inquiry.

THIRD YEAR'S STUDENTS (SCIENCE EXHIBITION).

MIXED MATHEMATICS.—*Examiner, Professor Curtis*, LL.D.

1. If any number of intersecting, or parallel forces, lie in one plane, prove that the sum of their moments, taken with respect to any point in the plane, is equal to the moment of their resultant, taken with respect to the same point.

2. If a be the side of a regular hexagon, which is divided into two equal parts by a diagonal, prove that the distance of the centre of gravity of either half from the diagonal is equal to $\frac{2a}{3\sqrt{3}}$.

3. Two equal bars, AB, BC, of uniform thickness and density, rigidly connected at B, are suspended from A; if θ and α denote respectively the inclination of AB to the vertical, and to BC, prove that, in the position of equilibrium, $\cot\theta = \frac{3-\cos\alpha}{\sin\alpha}$.

4. A given weight W is placed at the centre of inscribed circle of a horizontal triangular table, the sides of which are a, b, c, and whose weight is w; prove that the pressures, sustained respectively by the three legs placed at the three angles A, B, C, are—

$$\frac{w}{3}+\frac{a}{a+b+c}\,W,\quad \frac{w}{3}+\frac{b}{a+b+c}\,W,\quad \frac{w}{3}+\frac{c}{a+b+c}\,W.$$

5. Find the velocity acquired by a heavy body in falling down the entire length of an inclined plane.

6. From a given point draw a line down which a heavy body will descend to a fixed line in the shortest time possible.

> The line of descent makes with the perpendicular to the fixed line an angle equal to half the inclination of the fixed line to the horizon.

7. If a cone be immersed in a liquid, its base being horizontal and vertex at a given depth below the surface of the liquid, find an expression for the entire pressure to which it is exposed.

8. If equal weights of n substances, whose specific gravities are $s_1, s_2 \dots s_n$, be compounded without loss of volume, prove that s, the specific gravity of the compound, is given by the equation—

$$\frac{1}{s}=\frac{1}{n}\left(\frac{1}{s_1}+\frac{1}{s_2}+\ \&c. \dots \frac{1}{s_n}\right)$$

9. Establish the formula connecting the conjugate foci of a thin lens.

10. Prove that for objects near the zenith the refraction varies as the tangent of the apparent zenith's distance.

Appendix, No. 2.

Scholarship Examinations.

ENGINEERING SCHOLARSHIPS.

SENIOR CLASS.—*Examiner, Professor Townsend,* M.A.

1. Reduce the accompanying figure to a triangle, and calculate the acreage, the scale being 2 chains to 1 inch.

2. In the transit theodolite, if the level be attached to the telescope and not to the vertical vernier, how would you effect its adjustment?

3. The contents of a field measured with a chain $\frac{1}{4}$ of a link too long are 19A. 3R. 36P.; required the true acreage.

4. The sides of a triangle are 2569, 4900, 5025 links; find the contents in Irish acres.

5. Find the latitude of a place from the altitude of the sun, using all the necessary corrections, and taking the natural horizon.

6. The radius of a sphere is R; find volume of cap cut off by a plane whose distance from centre is P.

7. Explain the mode of solving large triangles in a trigonometrical survey by Legendre's principle; *e.g.*, if three angles be observed and a side measured, how would you test the accuracy of the observations, and how would you solve the triangle?

8. Prove the prismoidal formula, and give the general expressions for area of ground and slopes.

9. Compute the area of cross section of a piece of earthwork where the ground has a uniform sidelong slope not intersecting the base.

10. Define a truly level surface. Show the modifications of it adopted in practice, and describe how it affects levelling operations.

MIDDLE CLASS.

1. Given projections of a point and of a sphere, construct the traces of plane of contact of tangent cone from point to sphere.

2. Given the traces of a plane and horizontal projection of a point in it, if with this point as centre a circle of given radius be described in the plane; find its horizontal projection.

3. Given the projections of two lines; find projections of shortest distance between them.

4. Through a given point draw a line perpendicular to a line whose projections are given.

5. Given the radius of a circle; find the semi-axes and area of its isometrical projection, and show how the projection is effected.

6. Find the vertical projections of the intersection of a sphere, and a vertical cylinder.

7. Given the horizontal projection of the eye, "ground line," height of eye, and picture of a line situated in the horizontal plane; find the line.

8. Given the rise and span of a five centered arch, construct it so that the extreme radii may equal the radii of curvature of an ellipse on the same axes, and the intermediate a geometrical mean between them.

9. Given the projections of a line, find its vanishing point; and trace of a plane, its vanishing line.

10. Construct a scale of ·875 inch to 20 feet sufficiently long to measure 100 feet, and subdivide it into feet.

11. The scale of a French map is given in French leagues; construct a scale of English miles sufficiently long to measure 200 miles. N.B.—A French league = 4262·84 yards, and 75 French leagues occupy 11·25 inches.

12. Construct the shadow on a circular pulley.

N.B.—Double credit will be given to 1 and 7.

Appendix, No. 2.

Scholarship Examinations.

CHEMISTRY.—*Examiner, Professor Rowney* PH.D.

1. Describe the method of preparing and the properties of oxygen gas.
2. Write the formulæ of the following compounds :—acetate of lead, bichromate of potash, alum, and gypsum.
3. What decomposition takes place when nitrate of ammonia is heated in a flask? Give the decomposition in symbols.
4. By what methods is the metal aluminum obtained?
5. What is meant by a rational and empirical formulæ?
6. What reaction takes place when a mixture of chlorine and hydrogen gases is exposed to the action of light?
7. What is the composition of alcohol and how is it obtained?
8. Describe the method of obtaining caustic potash.
9. What is meant by catalysis?
10. Describe the process for obtaining metallic mercury.
11. When are salts said to be isomorphous?
12. What is meant by a homologous series?

Sessional Examinations.

SESSIONAL EXAMINATIONS, 1865.

FRENCH.—*Examiner, Professor Bensbach,* M.D.

FIRST YEAR'S STUDENTS.

[Extracts from Mignet's "Revolution Française" and Racine's "Athalie." Exercises from Delille's Grammar, and questions in French Grammar.]

Honors.

[Extracts from Mignet and Racine, which had not been read in the class. Exercises from Delille's Grammar, questions in French Grammar, and questions in French literature.]

SECOND YEAR'S STUDENTS.

[Extracts from La Bruyère and Voltaire's "Mérope," and exercises from Delille's French Grammar.]

Honors.

Translate into French :—

Catherina, born near Dorpat, a little city in Livonia, was heiress to no other inheritance than the virtues and frugality of her parents. Her father being dead, she lived with her aged mother in their cottage covered with straw; and both, though very poor, were very contented. Here, retired from the world, by the labour of her hands she supported her parent, who was now incapable of supporting herself. While Catherina was engaged at her work, the old woman would sit by and read some book of devotion.

Though her face and person were models of perfection, yet her whole attention seemed bestowed upon her mind; her mother taught her to read, and an old Lutheran minister instructed her in the maxims and duties of religion.

Translate the following extracts :—

Zopire. Je te connais, Omar : en vain ta politique
Vient m'étaler ici ce tableau fanatique ;
En vain tu peux ailleurs éblouir les esprits ;
Ce que ton peuple adore excite mes mépris.
Bannis toute imposture, et d'un coup d'œil plus sage
Regarde ce prophète à qui tu rends hommage ;
Vois l'homme en Mahomet ; conçois par quel degré
Tu fais monter aux cieux ton fantôme adoré.
Enthousiaste ou fourbe, il faut cesser de l'être ;
Sers-toi de ta raison, juge avec moi ton maître :
Tu verras de chameaux un grossier conducteur,
Chez sa première épouse insolent imposteur,
Qui, sous le vain appât d'un songe ridicule,
Des plus vils des humains tente la foi crédule ;
Comme un séditieux à mes pieds amené,
Par quarante vieillards à l'exil condamné :
Trop léger châtiment qui l'enhardit au crime.
De caverne en caverne il fuit avec Fatime.
Ses disciples errants de cités en déserts,
Proscrits, persécutés, bannis, chargés de fers,
Promènent leur fureur, qu'ils appellent divine ;
De leurs venins bientôt ils infectent Médine.
Toi-même alors, toi-même, écoutant la raison,
Tu voulus dans sa source arrêter le poison.
Je te vis plus heureux, et plus juste, et plus brave,
Attaquer le tyran dont je te vois l'esclave.
S'il est un vrai prophète, osas-tu le punir ?
S'il est un imposteur, oses-tu le servir ?

VOLTAIRE.

[An extract from La Bruyère, *vivâ voce* from the chapter—"De l'Hómme."]

Maurice obtint la permission de retourner à l'armée à la tête de son régiment, et il prit part aux guerres que l'électeur de Saxe soutenait alors pour reconquérir son royaume de Pologne. Un jour qu'il allait rejoindre l'armée saxonne à Sandomir, ayant cru sur un faux bruit qu'un armistice venait d'être signé entre les Saxons et les Polonais, il se mit en route accompagné seulement de cinq officiers et d'une douzaine de serviteurs. Arrivé au petit village de Krosniec, il se mettait à table avec ses officiers dans une salle d'auberge, quand on lui annonça que les ennemis accouraient. C'était une troupe d'environ huit cents cavaliers. Sans hésiter une seconde, Maurice se décide à la lutte et prend ses dispositions avec autant de sang-froid que de vigueur. Il a trop peu de monde avec lui pour défendre la cour de l'auberge et les murailles qui l'environnent ; il se retranche dans la maison, résolu à s'ensevelir sous ses ruines plutôt que de se rendre. C'est Charles XII. à Bender. Quelques-uns des soldats de Maurice gardent le rez-de-chaussée de la maison, tandis que les autres, déchargeant leurs mousquets par les fenêtres du premier étage, déciment les assaillans. Les postes d'en bas vont céder au nombre ; Maurice les rappelle, detruit l'escalier, barricade les portes, et la lutte recommence avec acharnement. L'ardeur du chef et sa présence d'esprit se communiquent aux soldats. Vingt contre mille, ils comprennent qu'ils doivent frapper à coup sûr. Ceux-ci tirent par les croisées converties en meurtrières ; ceux-là, faisant des trouées dans

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Sessional Examinations.

le plancher, mitraillent du haut en bas l'ennemi entassé dans les salles. Le combat dura plus de cinq heures; les Polonais, dont les rangs venaient tomber tour à tour devant cette redoute si bravement défendue, se décident enfin à battre en retraite, laissant seulement quelques sentinelles pour investir la place.—SAINT-RENÉ TAILLANDIER.

GERMAN.—*Examiner, Professor Bensbach,* M.D.

FIRST YEAR'S STUDENTS.

[Extracts from Schiller's Poems and Scherer's "Lecture on Literature." Exercises from Tiack's German Grammar.]

Honors.

[Extracts from Schiller's Poem "Das verschleinte Bild zu Lais," and from Scherer's "Lecture on Literature."]

We are now at the end of our studies of the first year, and to-day our
studien
professor examines us all to see what progress we have made in the
prüfen *Fortschritt*, m. (plur.)
German language.

We have read many beautiful poems of Schiller, who is one of the greatest German poets. We have also read a part of a lecture on the
Dichter, m. *Theil*, m. *Vorlesung über*
earliest literature of Germany. We found this lecture very difficult in the
früh *Deutschland*, n. *schwer*
beginning, but it became gradually more easy. The German grammar
Anfang, m. *allmählig* *leicht* *Grammatik*, f.
and some easy exercises formed also a part of our studies, for the know-
ausmachen *Kennt-*
ledge of the grammar is necessary.
niss, f. *nothwendig*.

SECOND YEAR'S STUDENTS.

Honors.

Translate into German:—

Lewis saw with peculiar emotion the calamities of the House of Stuart. It is but just to say that motives nobler than ambition or fear had a large share in determining his course. His heart was naturally compassionate, and this was an occasion which could not fail to call forth all his compassion. His situation had prevented his good feelings from fully developing themselves. Sympathy is rarely strong where there is a great inequality of condition; and he was raised so high above the mass of his fellow-creatures that their distresses excited in him only a languid pity. But all the tenderness of which he was capable was called forth by the misery of a great king who had a few weeks ago been served on the knee by lords, and who was now a destitute exile. With that tenderness was mingled, in the soul of Lewis, a not ignoble vanity.

MACAULAY; *History of England,* II.

Translate the two following extracts :—

I.

Der Mai iſt gekommen, die Bäume ſchlagen aus,
Da bleibe wer Luſt hat mit Sorgen zu Haus;
Wie die Wolken wandern am himmliſchen Zelt,
So ſteht auch mir der Sinn in die weite, weite Welt.

Herr Vater, Frau Mutter, daß Gott euch behüt,
Wer weiß, wo in der Ferne mein Glück mir noch blüht;
Es gibt ſo manche Straße, da nimmer ich marchirt,
Es gibt ſo manchen Wein, den ich nimmer noch probirt.

Friſch auf drum, friſch auf im hellen Sonnenſtrahl,
Wohl über die Berge, wohl durch das tiefe Thal;
Die Quellen erklingen, die Bäume rauſchen all',
Mein Herz iſt wie 'ne Lerche, und ſtimmet ein mit Schall.

Und find' ich keine Herberg, ſo lieg' ich zu Nacht
Wohl unter blauem Himmel; die Sterne halten Wacht;
Im Winde die Linde, rauſcht mich ein gemach,
Es küſſet in der Früh' das Morgenroth mich wach.

O Wandern, o Wandern, du freie Burſchenluſt,
Da wehet Gottes Odem ſo friſch in die Bruſt;
Da ſinget und jauchzet das Herz zum Himmelszelt:
Wie biſt du doch ſo ſchön, o du weite, weite Welt!

E. Geibel: Gedichte, Lied 32.

II.

Als die Gallier durch das colliniſche Thor in die Stadt eingebrochen waren, fanden ſie alles öde und ausgeſtorben: das Grauſen, welches einen Fremden ergreift, der im Sommer in einer Stadt des hohen Nordens um Mitternacht Tageshelle und kein Leben auf den Gaſſen ſieht, kam über ſie. Alle Häuſer waren verſchloſſen, man zog immer vorwärts bis auf das Forum. Hier erblickten ſie in der Höhe die Bewaffneten auf der Burg, auf dem Comitium die curuliſchen Greiſe, welche Weſen einer andern Welt zu ſein ſchienen. Zweifelhaft ob nicht die Götter herabgeſtiegen wären, um Rom zu retten oder zu rächen näherte ſich ein Gallier einem der Prieſter, M. Papirius, und berührte ſeinen weißen Bart, der Greis ſchlug ihn zornig mit dem elfenbeinernen Scepter über den Kopf; der Barbar hieb ihn nieder, und alle wurden umgebracht. Dann begann die Plünderung im ganzen Umfang der Stadt, und bald brach hier und dort Feuer aus. Tag für Tag, ſo lang verborgenes Gut entdeckt ward, erneuerten ſich dieſe Auftritte; die Feuersbrünſte vermehrten ſich, und bis auf wenige Häuſer auf dem Palatium, welche die Heerführer zur Wohnung für ſich erhalten ließen, ward die ganze Stadt eingeäſchert.

B. G. Niebuhr; Römiſche Geſchichte.

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THIRD YEAR'S STUDENTS.

Honors.

Translate into German :—

The personal qualities of the French king, Louis XIV., added to the respect inspired by the power and importance of his kingdom. No sovereign has ever represented the majesty of a great state with more dignity and grace. He was his own prime minister, and performed the duties of that arduous situation with an ability and an industry which could not be reasonably expected from one who had in infancy succeeded to a crown, and who had been surrounded by flatterers before he could speak. He had shown, in an eminent degree, two talents invaluable to a prince, the talent of choosing his servants well, and the talent of appropriating to himself the chief part of the credit of their acts. In his dealings with foreign powers he had some generosity, but no justice.

MACAULAY: *History of England.*

Translate two of the following extracts :—

I.

Vermöge ſeines Feuchtigkeits-gehalts leitet der menſchliche Körper die Elektricität. Wenn man auf dem Boden ſtehend den Conduktor der Elektriſirmaſchine anfaßt, ſo wird alle Elektricität durch den Körper hindurch abgeleitet. Iſolirt man aber den Körper, indem man ſich auf einen Harzkuchen oder einen mit Glasfüßen verſehenen Schemel ſtellt und bringt ihn mit dem Conduktor der Elektriſirmaſchine in Verbindung ſo wird derſelbe ſelbſt elektriſch und man kann aus ihm, wie aus dem Conduktor der Maſchine, Funken ziehen. Dabei ſträuben ſich die Haare auf dem Kopfe und die elektriſirten Perſonen haben auf der Haut, namentlich des Geſichts, eine eigenthümliche Empfindung, ähnlich der, als ob ſie in Spinnweben gerathen wären.

Man brachte in früherer Zeit dieſes ſogenannte elektriſche Bad häufig bei Kranken in Anwendung und ſchätzte es als ein koſtbares Reitzmittel. Die phyſiologiſchen Wirkungen deſſelben ſind jedoch ſehr gering und nur bei empfindlicheren Perſonen wird man danach eine Erhöhung der Eigenwärme oder eine größere Pulsfrequenz nachweiſen können.

Das Ueberſpringen des elektriſchen Funkens auf einen Korpertheil verurſacht eine unangenehme prickelnde oder ſtechende Empfindung und bei längerer wiederholter Einwirkung eine Röthung der getroffenen Hautſtelle.

B. A. Erdmann :—Anwendung der Electricität.

II.

Wilhelm der Erſte, Prinz von Oranien, ſtammte aus dem deutſchen Fürſtenhauſe Naſſau, welches ſchon acht Jahrhunderte geblüht, mit dem öſterreichiſchen eine Zeitlang um den Vorzug gerungen, und dem deutſchen Reiche einen Kaiſer gegeben hatte. Außer verſchiedenen reichen Ländereien in den Niederlanden, die ihn zu einem Bürger dieſes Staats und einem gebornen Vaſallen Spaniens machten, beſaß er in Frankreich noch das unabhängige Fürſtenthum Oranien. Wilhelm ward im Jahr 1533 zu Dillenburg, in der Grafſchaft Naſſau, von einer Gräfin Stolberg geboren. Sein Vater, der Graf von Naſſau, hatte die proteſtantiſche Religion angenommen, worin er auch ſeinen Sohn erziehen ließ; Karl der Fünfte aber, der dem Knaben ſchon frühzeitig wohl wollte, nahm ihn ſehr jung an ſeinen Hof und ließ ihn in der römiſchen aufwachſen. Dieſer Monarch, der in dem Kinde den künftigen großen Mann ſchon erkannte, behielt ihn neun Jahre um ſeine Perſon, würdigte ihn ſeines eigenen Unterrichts in Regierungsgeſchäften, und ehrte ihn durch ein Vertrauen welches über ſeine Jahre ging. Ihm allein war es erlaubt, um den Kaiſer zu bleiben, wenn er fremden Geſandten Audienz gab—ein

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Beweis, daß er als Knabe ſchon angefangen haben mußte den ruhmvollen Beinamen des Verſchwiegenen zu verdienen. Der Kaiſer erröthete ſogar nicht, einmal öffentlich zu geſtehen, daß dieſer junge Menſch ihm öfters Anſchläge gebe, die ſeiner eigenen Klugheit würden entgangen ſeyn. Welche Erwartungen konnte man nicht von dem Geiſte eines Mannes hegen der in einer ſolchen Schule gebildet war!

Schiller: Abfall der vereinigten Niederlande.

III.

Mein junger Fürſt! man ſoll nicht zagen,
Will uns das Schickſal Gunſt verſagen!
Oft iſt ein Unglück uns beſtimmt,
Das gar ein fröhlich Ende nimmt.—
Mein Bruder ward mit mir erzogen:
Das war ein Burſch euch! ungebogen
Von jeder Noth, ein ſtarker Bub,
Dem ſtets Gefahr den Muth erhub.
Nun kam an einem Abend Kunde,
Es lieg ein Bär im Eichengrunde.
Wir beide faßten ſchnell den Rath
Zur erſten kühnen Waffenthat.
Auf engem Pfad war's wo wir ritten;
Da lag ein Würzlein in der Mitten,
Das ſchen mein Pferd, weiß nicht wie's kam,
Vielleicht für eine Schlange nahm.
Wild bäumt es: ich, der Kerngeſunde,
Im Fall ſchlag ich mir eine Wunde
Die rechte Hand war ausgerenkt—
Da hieß es ſtill nach Haus gelenkt!
Nun weiß ich noch wie ich gewettert,
Daß ſo mein grüner Ruhm entblättert,
Ich hieb in meinem blinden Zorn
Das arme Roß mit Gert' und Sporn.
Doch wie der Tag zu Ende eilte,
Allmählich ſchon der Arm mir heilte,
Da brachten ſie in blutigem Graus
Den todten Bruder mir in's Haus.

G. Kinkel: Otto der Schütz.

MIXED MATHEMATICS.—*Examiner, Professor Curtis*, LL.D.

THIRD YEAR'S ARTS.

1. Find the point on a surface represented by $\left(\frac{x}{a}\right)^3 + \left(\frac{y}{b}\right)^3 + \left(\frac{z}{c}\right)^3 = 1$, where a particle attracted to the origin by a force varying as the distance will rest in equilibrium.

2. A smooth hemispherical shell, whose base is closed, includes two equal spheres, whose radii are one-third of that of the shell; the shell

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is placed with its base vertical: find the mutual pressure at all the points of contact.

3. Find the centre of gravity of the volume included between a paraboloid of revolution and a plane perpendicular to its axis.

4. Find the form of the catenary of equal strength.

5. Determine the positions of equilibrium of an elliptic board, the plane of which is vertical, supported by two pegs in the same horizontal line.

6. The velocity of projection and initial point being given, determine the direction of projection so that the projectile may touch a given line.

7. Form the equation of the circular pendulum and determine in what cases this equation may be integrated.

8. Establish the following equation for the motion of a body in an ellipse, acted on by a force directed towards the focus, $v^2 = \mu\left(\frac{2}{r} - \frac{1}{a}\right)$.

9. A body describes an ellipse under the action of a force directed towards a point in its plane; find the law of force.

10. Determine the position of equilibrium of a portion of an ellipsoid floating in a liquid.

11. Find the caustics by reflexion and refraction of an equilateral spiral, the luminous point being at the pole.

12. An orbit being given, determine the corresponding aberratic curve.

SECOND YEAR'S ARTS.

NATURAL PHILOSOPHY.—*Examiner, Professor Curtis,* LL.D.

1. Find the resultant of two forces of 10 lbs. and 3 lbs. respectively, when their directions intersect—

(α) At a right angle.
(β) At an angle of 60°.
(γ) At an angle of 30°.

2. The upper extremities of two cords, whose lengths are 15 and 20 inches respectively, are fastened to two points in a horizontal line, the other extremities are joined at the same point to a weight of 20 lbs., and the strings intersect at right angles; find the tension on each of the strings.

3. Resolve a force of 700 lbs. into two codirectional forces acting at distances from it of 3 and 13 respectively.

4. Find the centre of gravity of the quadrilateral figure formed by two isosceles triangles on same base, their altitudes being 3 feet and 5 feet respectively—

(α) When the vertices of the triangles are at the same side of the base.

(β) When the vertices are at opposite sides of the base.

5. In a simple wheel and axle the radius of the axle is 3 inches, that of the wheel 1 foot, the power is 16 lbs.; find the weight.

6. Two heavy balls are projected at the same instant with velocities

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of 5 and 7 respectively, the first horizontally, the second in the direction making 30° with the vertical; find the distance between the balls after 5 seconds, and show how to determine the absolute position in space of each at any instant.

7. A prism, whose edge measures one foot, sinks in water to the depth of 8 inches, and in another liquid to the depth of 10 inches; find the specific gravity of the liquid, and of the solid prism.

8. A square, the side of which is 4 inches, is sunk in a liquid whose specific gravity is 2, so that its centre is 3 feet below the surface; find the total pressure of the liquid against either surface of the square.

9. The focal length of a concave mirror is 8 inches, an object is placed 5 inches from it; find the position and magnitude of its image.

10. The radii of the two surfaces of a thin double convex lens of glass are 8 inches and 10 inches respectively; find its focal length.

11. Explain why during half the year the days are longer than the nights, while during the rest of the year the reverse is the case.

12. How may the latitude and longitude be found *at sea* ?

Honors.

1. To what problem of plane trigonometry are the following mechanical problems respectively reducible, and by what formula would you solve each ?—

(*a*) Given the magnitude of each of three forces in equilibrio; find the angles between their directions.

(*b*) Given two forces and the angle between their directions; find the magnitude of their resultant, and its inclination to either of the components.

2. The angle between two forces is 37°, and their resultant divides it into segments of 31° and 6° respectively; find the ratio of the two forces.

3. Deduce the equation of equilibrium of a heavy body placed on a rough inclined plane, and acted on by a force making an angle α with the plane.

4. A stone is projected down a vertical height of 500 yards, and performs its course in 9 seconds; find velocity of projection.

5. Establish the formulæ for centrifugal force, viz. :—

$$f = \frac{v^2}{r} = \omega^2 r = \frac{4\pi^2 r}{T^2}.$$

6. An imperfectly elastic body falls on a horizontal slab from a height H; prove that h, the height to which it will rise after the n^{th} hop, is given by the equation, $h = e^{2n}H$, where e is the coefficient of elasticity.

7. A rectangular surface, 6 feet by 8, is immersed in water with the shorter side horizontal, the upper surface being 16 feet, and the lower 24 feet below the surface; find the centre of pressure, and the total pressure.

8. How would you find the specific gravity of a small *solid* by means of the specific gravity bottle ?

9. Deduce the formulæ for determining the position and magnitude of an image formed by a mirror, and a thin lens, the magnitude and position of the object being given. How do you know in each case whether the image is erect or inverted ?

10. Find the principal focus of a spherical lens of glass.

11. Prove that the refraction of objects *near the zenith* is nearly proportional to the tangent of the apparent zenith distance.

12. Deduce the formula for computing the moon's distance from the earth.

MATHEMATICS.—*Examiner, Professor Allman*, LL.D.

THIRD YEAR'S STUDENTS.

1. Find the equations and magnitude of the shortest distance between two lines which do not intersect.

2. Find the condition that the plane $Ax + By + Cz + D = 0$, shall touch the ellipsoid $\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1$.

3. Determine the equation of the right conoid passing through a helix and the axis of the cylinder on which the helix is traced.

4. Find the osculating plane of the line of curvature—

$$\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1,\ \frac{x^2}{a_1^2}+\frac{y}{b_1^2}+\frac{z^2}{c_1^2}=1.$$

5. Determine the equation of the cone whose vertex is at the point x', y', z', and which stands on the conic in the plane xy, $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$.

6. Integrate the differential equations: $xydy - y^2dx = (x+y)^2\varepsilon^{\frac{y}{x}}\,dx$; $(x+y)^2dy = a^2dx$; $y = x(p - \sqrt{1+p^2})$; $x^2\frac{d^2y}{dx^2} - x\frac{dy}{dx} = 3y$.

7. Show that the curve in which the radius of curvature varies as the cube of the normal is a conic section.

8. Investigate the solution of the partial differential equation—

$$Pp + Qq = R.$$

Integrate the partial differential equations—

$$(x+y)p + (y-x)q = z;\ x^2p + y^2q = nxy.$$

SECOND YEAR'S STUDENTS.

1. (*a*). Find the equation to the normal of a parabola which is inclined at a given angle to the axis of the curve.

(*b*). Hence find the locus of the intersection of two normals of a parabola which cut at right angles.

2. If tangents be drawn from any point without an ellipse to the curve, prove that their lengths are inversely as the sines of the angles which they make with the lines drawn from their points of contact to either focus.

3. Change the independent variable in $(1-y^2)\frac{d^2u}{dy^2} - y\frac{du}{dy} + n^2u = 0$, from y to x, being given $y = \cos x$.

4. Let $y^3 - ay + b = 0$; expand y in powers of $\frac{1}{a}$.

5. The degree of a curve being n, prove that there cannot be more than $n\ (n-1)$ tangents drawn to it from one point.

6. Find the radius of curvature of the catenary—

$$y=\frac{c}{2}\left(e^{\frac{x}{c}}+e^{-\frac{x}{c}}\right).$$

7. Find the length of the arc measured from the origin of co-ordinates of the curve $ay^2=x^3$.

8. (*a*). Find $\int dx\, x^3\,(a+bx^2)^{\frac{2}{3}}$; $\int\frac{dx}{(a+bx^2)^2}$; $\int\frac{dx}{a+b\tan x}$.

(*b*). And prove the formula of reduction—

$$\int dx\,(\tan x)^n=\frac{(\tan x)^{n-1}}{n-1}-\int dx\,(\tan x)^{n-2}$$

FIRST YEAR'S STUDENTS.

Honors.

1. O is a point within a triangle A B C at which the sides subtend equal angles, and α, β, γ are the distances from A, B, C respectively; find the sides and the area of the triangle.

2. The base of a spherical triangle is produced until the whole arc is a quadrant, and the extremity is joined to the vertex by an arc of a great circle; express the cosine of this arc in terms of the sides of the triangle.

3. Prove that the surface of a sphere is equal to the curved surface of its circumscribed cylinder.

4. Expand θ in powers of $\tan\theta$.

5. Define triangular, pyramidal, and, in general, figurate numbers, and show how to find the sum of n terms of each series.

6. Solve the following equations—

$$x^3-9x^2+6x+2=0;\quad x^5-11x^4+17x^3+17x^2-11x+1=0.$$

7. Solve the equation $x^4+5x^3-12x^2-44x+80=0$, which has two equal roots.

8. Find the area of the triangle included between the lines $y=x\tan\alpha$, $y=x\tan\beta$, $y=x\tan\gamma+b$.

9. If $\frac{x}{a}+\frac{y}{b}=1$ be the equation of the chord of the circle $x^2+y^2=r^2$; find its length.

Pass.

1. Find the number of combinations of n things, taken r at a time.

2. Determine all the prime numbers as far as 100; and decompose the number 138567 into the continued product of its prime factors.

3. Find the sum of the first 57 odd numbers.

4. State distinctly the several steps in the solution of a simple equation. Solve the equations—

$$\frac{x+5}{2}+\frac{2x-5}{5}=3x-9;\quad\frac{a+x}{b+x}=\frac{c+x}{d+x}.$$

5. A person after paying his workmen a shillings each has b shillings remaining; if he had paid them c shillings each, he would have had d shillings remaining; how much money had he?

Appendix, No. 2.

Sessional Examinations.

6. Solve the simultaneous equations—

$$ax+by=c,\ a'x+b'y=c'.$$

7. Give the method of solving a quadratic equation. Solve the equations—

$$\frac{x-2}{x+2}+\frac{x+2}{x-2}=\frac{2(x+3)}{x-3};$$

$$\frac{1}{x-a}+\frac{1}{x-b}+\frac{1}{x-c}=0.$$

8. Describe a square that shall be equal to a given rectilineal figure.

9. The opposite angles of a quadrilateral figure inscribed in a circle are together equal to two right angles.

10. The sides about the equal angles of equiangular triangles are proportional; and those which are opposite to the equal angles are homologous.

11. If from any angle of a triangle a perpendicular be let fall on the opposite side, the rectangle under the sides containing that angle is equal to the rectangle under the perpendicular and the diameter of the circle circumscribed about the triangle.

12. In any triangle the sides are proportional to the sines of the opposite angles.

13. Find expressions for the sine and cosine of half an angle of a triangle in terms of the sides.

14. Prove the formulæ—

$$\sin(A-B)=\sin A\cos B-\cos A\sin B;$$

$$\frac{\sin A+\sin B}{\cos A+\cos B}=\tan\tfrac{1}{2}(A+B);$$

$$\tan 3A=\frac{3\tan A-\tan^3 A}{1-3\tan^2 A}.$$

METAPHYSICS.—*Examiner, Professor Moffett*, LL.D.

1. State the various views that may be entertained on the question of the Origin of Ideas, and the Origin of Knowledge.

2. Give Descartes' *proof* of Innate Ideas. Hamilton's explanation of the Cartesian doctrine cuts short much controversy?

3. State the principal objections to the doctrine of Natural Realism suggested by Hamilton, with his replies.

4. Show how the distinction of Sensation and Perception is related to that of the Qualities of Body. Explain and exemplify "Qualities *mediately* perceivable," and "Secundo-Primary Qualities." What was Kant's view of the Primary Qualities?

5. Examine the following reasoning :—"The Colour is not in the Object but in the Mind : we may, therefore, regard Extension and the *whole* Material Object as in the Mind." Define Colour.

6. "Our estimate of an object's distance from us," says Mill, "is the result of a comparison"—What are the things compared? Distinguish the Optical from the Muscular sensations in vision; and define Aërial and Linear Perspective.

7. In the sense of Touch, as commonly understood, there seem to be various Senses: specify these; the organic apparatus connected with them; and the functions fulfilled by them.

Appendix, No. 2.

Sessional Examinations.

8. Explain and give examples of the Automatic or Reflex processes.

9. Discuss the question—Whence do we derive the idea of Power; and give a classification of the opinions of philosophers on this subject.

10. Define and analyse Imagination; and point out the various operations and uses of this Faculty.

11. State and examine Descartes' Criterion of Truth; and his famous argument based on the Idea of Perfection.

12. State and examine the fundamental dogma of all forms of Pantheism; and the leading definitions and axioms of Spinoza's system.

13. Give Locke's definitions of Substance, Real and Nominal Essence, and Moral Good.

14. Cousin mentions an important instance in which he says that Locke has not confounded the Condition of a Principle with the Principle itself; and he mentions two opposite Schools that have fallen into error on this point?

15. Kant's doctrine as to the *subjectivism* of all Knowledge was also affirmed by Bacon; on what grounds? Do the Senses *deceive* us?

16. Explain fully and exemplify Kant's division of Judgments. Which class does he pronounce essential to Metaphysical science?

17. How are the Sensibility and the Understanding brought into connexion? Explain his deduction of the pure principles of the Understanding and the Reason.

18. Explain what is meant by the Paralogisms, Antinomies, and Ideals of the Reason.

19. What errors and defects have been pointed out in Kant's system?

20. Define Instinct, Passion, Affection, and Emotion; and classify the two latter mental states.

21. Discriminate the emotion of the Beautiful from that of the Useful and of the Sublime; and state the objective conditions which awaken these emotions severally.

ENGLISH LITERATURE.—*Examiner, Professor Moffett,* LL.D.

1. Distribute chronologically in tabular form the linguistic changes which have marked the whole of the period from the extinction of the Roman dominion in Britain to the accession of Elizabeth, giving in each case the works you would select as typical.

2. Dr. Latham has said, "The earlier the stage of a language is, the greater the amount of its inflexional forms." Is this true?

3. Illustrate this remark:—"The Literature of our Middle Ages is distinguished from that of Modern Times by several strongly marked features."

4. What qualities in Chaucer seem to you most remarkable? Illustrate your opinion by quotations.

5. Explain the following words and expressions from the Prologue, quoting the context in each case:—halwes, parvis, wastel, sheldes, sausefleme, mistere, lodemanage, goliardeis; for the nones, after on, for him was lever han.

6. Who are the principal personages in the several books of the Fairy Queen; and what moral virtues do they respectively represent?

7. Describe the six "counsellours" of Lucifera. Why has the poet thus associated them with her, and with each other?

8. How has the structure of the poem been criticised? And how defended?

Appendix, *No. 2.*

Sessional Examinations.

9. Show that the poetic life of Shakespeare may be divided into three periods; and name the chief dramas belonging to each period.

10. Give Schiller's definition of Tragedy, and delineate with reference to it the character of *Macbeth*. What is the source of "tragic pleasure"?

11. Enumerate the prose works of Bacon, Hobbes, and Milton, with brief remarks on the style of each.

12. Hallam says, "two of Ben Jonson's epitaphs are known by heart." Quote them.

13. How may Satirical Poetry be divided? Name a remarkable specimen of each kind; and mention the earliest writers of English Satire.

14. Sir James Stephen has said :—"Parsimonious of his applause, Pope has bestowed no praise which has not passed into a proverb; Dryden's eulogies are almost universally forgotten, but his censures are immortal." Illustrate this statement by naming the principal objects of Dryden's invective and Pope's panegyric, respectively.

15. What was the fundamental element of Pope's intellectual character? Give an estimate of the philosophical and poetical merits of the Essay on Man.

16. Johnson bestows unqualified praise on a passage in the Essay on Criticism; quote the lines, and the reasons of Johnson's eulogy.

17. In reference to what controversy did Swift write the Battle of the Books? Name the principal opponents in this controversy.

18. Macaulay remarks that the history of Burke's mind resembles the history of Bacon's in *the order* in which its powers expanded themselves. Explain this statement. How did Goldsmith characterize the genius of Burke?

19. Examine Wordsworth's theory of Poetical language.

20. Define and exemplify Euphuism, Annomination, and Assonance.

21. Point out the *contradictio in adjecto* involved in the following phrases :—*τρίπους τράπεζα*, a false verdict, a steel cuirass, rather late, an erroneous etymology, a corn chandler.

ENGLISH LANGUAGE.—*Examiner, Professor Moffett,* LL.D.

1. Mention the principal branches of the Aryan family of languages; and describe the evidence by which the affinity of these languages is proved.

2. What evidence have we that the inhabitants of the British islands were Celts before the commencement of the Christian era?

3. During the Anglo-Saxon times four languages were used for literary communication in the British islands; name them, and the principal literary productions of the period.

4. What evidence have we that Ireland was for some ages during this period the chief seat of learning in Europe?

5. Describe the four schemes according to which the history of the English Language in its entire extent may be methodized.

6. State the comparative advantages of a Synthetic and an Analytic language.

7. How do you account for the remarkable divergence of the Langue d'Oc and the Langue d'Oyl? At what dates, and under what circumstances, were these dialects introduced into England?

8. Explain the *way in which* the Norman Conquest appears to have acted in breaking down the system of the English tongue.

9. Who is the earliest recorded writer of French verse? Who is the earliest writer of English verse subsequent to the Conquest that deserves the name of poet?

Appendix, No. 2.

Sessional Examinations.

10. Give an account of the Ancren Riwle; or of the Vision of Piers Ploughman.

11. The state of international relations about the middle of the fourteenth century precipitated the decline of the French language in England? What is the first instance of the English language in the Parliamentary proceedings?

12. Show that the reign of Edward the Third was not more remarkable for its military triumphs than for its intellectual superiority in various departments.

13. By whom, and when, was the first book printed in England?

14. Who was the first English Prose writer; and what was the subject of his work?

15. Give the date and an outline of Chaucer's great work. The plan seems to be a great improvement on its supposed model?

16. Give Aristotle's definition of Tragedy; and show how it is exemplified in the characters of Macbeth and Lady Macbeth; quoting the most striking and significant passages.

17. Explain the following words, quoting in each case the context:—fantastical, metaphysical, convinces, aroint, weird, foisons, shard-borne, intrenchant, memorize, limited, affear'd, fee-grief.

18. What internal indications have we of the time when the tragedy was written?

19. Assign derivations for the following words:—prose, palfrey, dunce, tariff, topaz, harbinger, limner, church, gazette, assassin, alms, idyl.

20. Explain and illustrate the saying, that "Language is Fossil Poetry and Fossil History."

HISTORY.—*Examiner, Professor Moffett,* LL.D.

I.—1. The physical configuration of Greece exercised an important influence upon the political destinies of the people? How did the *patriotism* of an ancient Greek differ from that of a modern Englishman?

2. What historical authority do we possess for "the return of the Heraclidae"? What date is assigned for that event?

3. What was the essential principle of Solon's constitution? There are reasons for doubting the authenticity of the narrative of his interview with Crœsus?

4. Describe the character of Pericles, and his political position at the commencement of the Peloponnesian War.

5. What was the era of the greatest power and prosperity of Athens?

6. The introduction of Grecian Philosophy into Rome is commonly attributed to three Greeks who were sent thither as political envoys. State the time and the object of their mission.

7. How many of Creasy's Fifteen Decisive Battles of the World belong to the history of Greece?

II.—1. What constitutes the essence of the history of Rome as distinguished from that of Greece?

2. Who were the earliest of Roman historians, and when did they live? Who was the first Roman historian that composed in his own language?

3. What state documents, or other sources of reliable information, were accessible to Livy, and how far does he appear to have availed himself of them?

4. Trace the origin and progress of critical investigation into the credibility of early Roman history. Cornewall Lewis seems to have fixed rather too low a terminus of legitimate historical research?

5. Trace the steps by which the Plebeians acquired the same privileges as the Patricians. By what measures may the equalization of the orders be said to have been completed; and when, and by whom, were they enacted?

6. What remarkable anomaly do we find in the Roman constitution with respect to the seat of Legislative power? What prevented the conflicts which might have been expected to arise from this cause?

7. What was the grand and cherished aim of Julius Cæsar's policy when he had attained supreme power? Enumerate the measures by which he sought to achieve it.

III.—1. What was the occasion, and what the object, of the compilation of Domesday Book? What parts of England were excluded from this book, and what were the reasons of this exclusion?

2. Examine and illustrate the following statement:—"During the hundred and sixty years which preceded the union of the Roses, nine kings reigned in England. Six of these nine kings were deposed; five lost their lives as well as their crowns."—*Macaulay.*

3. Trace the progress of liberty as defined in Magna Charta, the Confirmation of the Charters, the Petition of Right, the Act of Habeas Corpus, and the Bill of Rights.

4. By whom, and in what year, was Ireland annexed to the English Crown?

5. By whom, and in what year, was Wales annexed to the English Crown?

6. Hallam says:—"What the Revolution did for us was this: it broke a spell that had charmed the nation."

(*a*). What was the spell?

(*b*). How did the Revolution break it?

7. How is Queen Victoria connected with the house of Plantagenet?

SENIOR LOGIC CLASS.—*Examiner, Professor Moffett*, LL.D.

1. Kant's definition of Logic proceeds upon a distinction which is, both psychologically and logically, untenable?

2. With what theories as to the nature of Mathematical and Moral Science is that definition of Logic connected which extends its province to Evidence generally?

3. State Plato's specific contributions to Logic.

4. What processes does Mill designate "Inferences improperly so called"? Other logicians dissent: on what grounds?

5. Prove that the rules of the different kinds of Opposition are not independent of each other.

6. From what kind of Proposition by means of the Relative Affections may the greatest number of inferences be drawn? Draw up a table of these.

7. Prove, without reference to the Special Rules, that no legitimate Syllogism can violate both the rules of the first Figure. How did the Schoolmen endeavour to legitimate A E O and I E O in this Figure?

8. Prove that O cannot be the Major unless in the third Figure; nor the Minor unless in the second.

9. Given the Major or Minor premise particular in the fourth Figure; find the Modes, respectively.

10. Discuss the saying, that "it is difficult to prove a Negative."

11. It has been proposed to reduce Baroko and Bokardo *ostensively;* exemplify the process in both cases. The proposed nomenclature seems inadequate?

12. By what argument does Hamilton endeavour to maintain his theory of the "Quantification of the Predicate?" How does Mill criticise this theory?

13. Write down in Hamilton's Notation the Modes ordinarily received in the first Figure.

14. Have the great discoveries in Natural Philosophy been made by *Reasoning?* Examine Plato's theory of Reminiscence, and Clarke's Theistic argument.

15. Give an account of the Method of Residues; and show its scientific value.

16. Examine Whewell's reasons for questioning the utility of Mill's Experimental Methods.

17. Define and exemplify what is meant by "*Heteropathic* laws of Mind."

18. Give Mill's account of the Deductive Method; and exemplify its application to Mental and to Social science. When may Physical science become deductive?

19. Show distinctly what is meant by an Analogical argument; in what it differs from a real Induction; and how the value of such an argument is to be measured. What constitutes the scientific importance of considerations from Analogy?

20. How does the consideration of Hypotheses enter into the Logic of Science? Point out their importance. Bacon explicitly recognises their value?

LOGIC.—*Examiner, Professor Moffett,* LL.D.

1. Define Truth, Credibility, Knowledge, and Reasoning.

2. Prove, and illustrate by examples, that I, E may be converted *simply:* A, E *by limitation:* and O, A *by negation.*

3. Prove the rules of Contrariety and Sub-contrariety from those of Contradiction.

4. Give Aristotle's definitions of Syllogism, Induction, and Enthymeme.

5. Enumerate and criticise the different formulas that have been propounded for the fundamental axiom of Syllogism.

6. Give a general classification of Syllogisms with respect to their Form—internal and external.

7. How many more Universal or Particular terms can be in the Premises than in the Conclusion?

8. Prove that, if the Minor premise of a Syllogism be negative, the Major must be universal; and that, if the Major premise be I, the Mode must be affirmative.

9. Prove that no Syllogism in the fourth Figure can be correct which has a Particular Negative among its Premises; or a Universal Affirmative for its conclusion.

10. Prove that the Modes A E E and I A I are invalid in the first Figure; and I E O in all the Figures.

Appendix, No. 2.

Sessional Examinations.

11. State the following arguments in Syllogistic form; pointing out the Major, Middle, and Minor Terms, and the Mode and Figure :—

(*a*) "Lias lies above red sandstone: red sandstone lies above coal; therefore lias lies above coal."

(*b*) "It is a mistake to suppose that the rents paid to landlords are a burden on the public, since corn would not be more plentiful or cheaper if they were abolished."

12. What is the conclusion from the following premises :—

"Two-thirds of the army were Prussians;
Two-thirds of the army were slaughtered"?

Reduce the reasoning to the Dictum de Omni.

13. Give concrete examples of the Reduction, both *ostensively* and *ad impossibile*, of a Syllogism in the second Figure, and of one in the third Figure; and prove the conclusiveness of both processes.

14. State and prove the rules of the Sorites.

15. Give a general classification of Fallacies. Distinguish Petitio Principii from Arguing in a Circle. Define and exemplify the Fallacy of Composition.

16. State the rules of Division. Subdivide three times "Rectilinear Figure."

17. Enumerate and define the Predicables; and point out the use of this classification.

18. Define Probability and Chance; and state and illustrate the two methods of combining probable arguments. What is the difference between the ancient and the modern conception of Chance?

19. Give a brief historical and critical account of the controversy respecting Realism.

20. Name and characterize the members of "the Pentarchy of Scholasticism," adding dates.

ENGINEERING STUDENTS OF THE THIRD YEAR.

PRACTICAL MECHANICS.—*Examiner, Professor Curtis*, LL.D.

1. Establish the formula for determining the amount of work done in raising a given quantity of water from one reservoir to another, the dimensions and positions of the two reservoirs being known.

2. When a pump, whose modulus is m, worked by a waterfall, the height of which is h, is used to pump water to a height, H, above the upper level; the following formulæ holds for x, the ratio of the quantity of water raised in a given time to the total flow available in the same time, $x = \frac{m h}{\mathrm{H} + h}$, $x = \frac{m h}{\mathrm{H} + m h}$, according as the water is pumped from the lower or higher level.

3. State the principle by which Tate determines the *shut off* for maximum useful effect, point out the defect in his method, and show how to rectify it.

4. Why is not Mariotte's law applicable to steam used expansively?

5. Define the centres of *oscillation*, of *gyration*, and of *percussion*, and show how to find them.

6. Find the moment of inertia of the rim of a wheel round the axle.

7. Establish the following formula for the work accumulated in Poncelet's wheel :—$\mathrm{U} = \frac{2\,\mathrm{W}}{g}(\mathrm{V} - v)v$.

8. Find the ratio of the velocity of the piston to that of the crank :—

(*a*) In the case of the fixed cylinder.
(*b*) When the cylinder is oscillatory.

Appendix, No. 2. Sessional Examinations.

And find, in the second case, the expression for the ratio of the angular velocity of the cylinder to that of the crank.

EXPERIMENTAL PHYSICS.—*Examiner, Professor Curtis,* LL.D.

1. How may the expansion of liquids by heat be proved, and how may the coefficient of expansion be calculated?
2. Mention a peculiarity respecting the freezing of saltwater, and also concerning the ice formed from it.
3. Describe the construction and mode of using the safety tube.
4. Define specific heat, and explain how it may be determined.
5. What is meant by latent heat of fusion? how may its amount be estimated?
6. Explain the principle of the syphon, and account for there being a limit to its height.
7. How is the rotation produced in Barker's mill?
8. Find the reading on Reaumur's, and the centigrade thermometer corresponding to 65° Fahrenheit.
9. What is the use of the metallic coatings in a Leyden jar?
10. When a jar is charged by being held near to the prime conductor of an electrical machine, what occasions the spark between the conductor and the knob of the jar?
11. Describe the electrophorus, and the mode of using it.
12. How may gunpowder be exploded under water by means of a galvanic battery?
13. Mention some experiments by which the action of a galvanic current on a magnetic needle may be exhibited.
14. What distinguishes a magnetic pole on the earth's surface?

Honors.

1. State the true law for the conduction of heat by metals.
2. When specific heat is determined by the method of mixtures, what corrections must be applied?
3. What assumptions are made in determining specific heat by the method of cooling?
4. The reflecting power of a surface is sometimes increased, and sometimes diminished by scratching it; account for this.
5. How may it be proved that sound is accompanied by vibrations?
6. When a quantity of water whose temperature is below freezing point is agitated it becomes *partly* frozen; account for this, and determine how much is frozen?
7. Define a ray of light on the undulatory theory.
8. What relation exists between the polarizing angle of an *ordinary* medium, and its index of refraction? Hence deduce Brewster's law.
9. Give the formula which combines all the laws respecting Newton's rings, giving the proof of it.
10. Show how the magnetic dip may be accurately formed by reversing the poles of a dip needle, and deduce the formula for computing it.

Appendix, No. 2.

Sessional Examinations.

11. Describe the construction and mode of using Gauss' Magnetometer, and give the law by which it measures the variation in the earth's magnetic intensity.

12. Give the formula for determining the mode of connecting a given number of cells, so that the intensity of the voltaic current may be a maximum.

MEDICAL STUDENTS.

MATERIA MEDICA.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. What characters and compounds have *all* the alkaloids in common?

2. Enumerate the officinal medical agents derived from the *animal* kingdom, that are not used merely as accessories.

3. What are the officinal parts of scammony, krameria, scilla, podophyllum, and uva ursi?

4. For what purposes in medicine may glycerine be employed with advantage?

5. What are the average doses for adults of strychnia in hemiplegia—of pulvis galapod comp., as a hydrargyrum cathartic—of tinct. hyoscyami as a calmative—and of arsenious acid as an anti-periodic?

6. Which of the officinal cinchonas contains the largest proportion of quinia?

7. What objections would there be to combining sulphas zinci and acetas plumbi together in solution as an astringent collyrium?

8. By what is the officinal carbonas lithiæ distinguished from other alkaline salts, and how is its metallic base distinguished from all other metals?

MEDICAL JURISPRUDENCE.—*Examiner, Professor M'Coy,* F.R.C.S.I.

1. Explain the terms asphyxia, stupor, typhomania, and syncope, as employed in cases dealt with in medical jurisprudence.

2. In applying what is called Marsh's test for the detection of arsenic, what modification of its principle would be advantageous if much animal matter, not easily separable, be mixed with the poison?

3. Under what circumstances would the absence of frothy mucous in the trachia and bronchi give no material evidence against the probability of death from drowning?

4. Are any of the conditions in the legal definition of rape essential to establish the *corpus delicti;* what medical evidence must be substituted or superadded? (Briefly.)

5. Describe the dialysing instrument; how used. State what class of substances are discernible by the process of dialysis.

PRIZE EXAMINATION.—SESSION, 1864–65.

ZOOLOGY.—*Examiner, Professor Melville,* M.D.

1. State the characteristics of the Cœlenterata; mention the principal divisions and their essential characters.

2. Give a sketch of the anatomy of a star-fish.

3. Give a sketch of the development and transformations of a nematoid worm.

4. Give a similar sketch of the development and transformations of a cestoid worm.

5. State the sub-types of the Crustacea, and their principal characteristics.

6. Describe the structure of the mouth in Hymenopterous, Lepidopterous, and Dipterous insects.

7. Give a tabular view of the classification of the Mollusca, stating the principal characters of the major groups.

BOTANY.

1. Define the terms :—Cambium, Stolo, Pedunculus, Endospermium, Arillus, Putamen.

2. Give a tabular view of the natural classification of plants, and mention the characteristics of the major groups.

3. Describe the structure of the flower in grasses.

4. State the characters of the natural orders :—Umbelliferae, Labiatæ, Orchidaceæ.

5. Describe in technical terms the plants :—Nos. 1 and 2.

GEOLOGY.—*Examiner, Professor William King.*

1. Write out in a column a table of the various *rock systems* in the order of their succession ; add another column giving the subdivisions or formations.

2. Name any districts in Ireland in which the *systems* are well represented.

3. Write out a table of the various *kinds* of rock, separating them into groups (in columns) according to the way in which they have been formed.

4. Describe quartz.
5. Describe felspar.
6. Describe mica.
7. Describe calcite.
8. Describe pyrites.
9. Describe hornblende.
10. Describe granite.
11. Describe porphyry.
12. Describe mica schist.
13. Describe serpentine.
14. Describe limestone.
15. Describe sandstone.
16. Describe slate rock.
17. Describe the origin of metamorphic rocks.
18. Describe the origin of aqueous rocks.
19. Describe the origin of igneous rocks.

In answering the three last questions illustrate your views as far as you can by references to existing phenomena in physical geography.

20. Give descriptions and examples of strike, dip, a syncline, an anticline, conformability and unconformability in stratification.

Appendix, No. 2.

Sessional Examinations.

CHEMISTRY.—*Examiner, Professor Rowney*, PH.D.

1. Give the composition of the atmosphere, its properties and uses.
2. What compound is formed when the diamond is burnt in oxygen gas?
3. Mention the principal constituents of coal gas.
4. Describe the method of preparing, and the properties of hydrogen gas.
5. What is meant by capillary attraction?
6. What compounds are produced when an excess of chlorine gas is passed into a solution of caustic potassa?
7. What is meant by an elementary body?
8. Give the composition and properties of starch.
9. Give the laws of combination by weight and volume.
10. What is meant by isomorphism?
11. What is the composition of the salts called alums?
12. Give an explanation of the terms specific and latent heat.

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